

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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The Country Must Wake Up To Its Danger

The first and foremost duty of every American citizen is to do his utmost to bring about a condition of preparedness of our army and navy, not to make war, but to prevent war.

The possibilities of our wholly unprepared condition make every intelligent man who knows the situation shudder.

This the richest country on earth is hopelessly and helplessly unprepared to save itself from any strong enemy.

We hold here billions on top of billions of wealth unprotected.

The vastness of our wealth makes us the richest possible prize ever presented to any military country in the world's history.

"War is hell" and we must save ourselves from "hell" by being prepared to guard ourselves.

Think of New York with its vast stores of wealth without a police system or any organized means of preventing robbers from looting it, and you have a faint conception of our national situation.

How long would talk of "Peace" keep thieves and robbers from overrunning New York and looting its rich treasures if that city were without a police system?

BALTIMORE, SEPTEMBER 16, 1915



First Aids to the Boiler Room

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SPARTANBURG, SOUTH CAROLINA

Brick, Tile and Fire-Proofing Machinery



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MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office

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AMERICAN SELF-RESPECT INCREASED BY DR. DUMBA'S DISMISSAL.

ON Friday last every decent American walked with his head a little more erect and felt that his backbone was not made of mush.

Every decent American wholeheartedly thanked President Wilson for having demanded the recall of Austria's Ambassador, whose longer stay in this country would have been an unspeakable disgrace to the manhood of the nation and a reflection on the intelligence and patriotism of the American people.

The people of the country breathed a little freer and their hearts beat with new patriotism, for they had begun to fear that every hour's delay in demanding the recall of Dr. Dumba would lessen our own self-respect and the respect of all civilization today and for all the centuries to come.

President Wilson and Secretary Lansing, though they have but done the simplest, plainest duty, are entitled to the thanks of the American people for their action, and still greater thanks will be accorded to them when other pestiferous representatives who have been engaged in similar work to that of Dr. Dumba shall have been summarily notified that their presence in this country is no longer permissible.

"THE NEW FREEDOM" NEEDED FOR PROSPERITY.

IN "The New Freedom" by Woodrow Wilson the following striking statement appears:

"Everything that touches our lives sooner or later goes back to the industries that sustain our lives. I have often reflected that there is a very human order in our Lord's Prayer; for we pray first of all 'Give us this day our daily bread,' knowing that it is useless to pray for spiritual graces on an empty stomach, and that the amount of wages we get, the kind of clothes we wear, the kind of food we can afford to buy, is fundamental to everything else."

Accepting President Wilson's statement of the case as correct, the manufacturer who creates employment for thousands of hands, the engineer who opens a mine, the capitalist who builds a railroad is providing the only foundation on which the spiritual graces can be developed.

In view of these facts emphasized by Mr. Wilson's striking statement, the thing of pre-eminent importance in this country, as in others, is to create em-

ployment by developing business activities. He who fights business is, therefore, fighting employment, fighting prosperity and making it useless to pray for spiritual graces, because he has developed conditions which mean empty pocketbooks and empty stomachs and lack of clothes.

When once the country fully understands the truth of this situation men will realize as never before that the constructive, upbuilding forces in agriculture, in manufactures, in railroad work are the forces that make the foundation on which to build spiritual graces and create ethical advancement.

Poverty is a curse. It saps the vitality of the individual and of the nation.

He who does most to destroy poverty is doing most to advance humanity.

Throughout the land there are millions of people whose stomachs would be better filled, whose wages would be higher, whose clothes would be newer and whose food would be more nourishing if the politicians who for the last decade have been ruling this country almost unto its ruin could be banished to some desert island and left there to make their own living instead of living, as they have been doing, on the country.

THE WAY FOR SOUTHERN MANUFACTURERS TO ENLARGE THEIR MARKETS.

IF the merchant could sell his wares by correspondence, there would be no drummers.

This is a self-evident proposition, and yet the broad application of this fact is not universally recognized and acted upon by Southern manufacturers, who have not, as a whole, come to a realization of the fact that if they want more than a local market they will have to make themselves known in places where big buyers go. This point was well illustrated in an editorial reference in last week's issue of the MANUFACTURERS RECORD to the establishment in New York by the Alabama Power Co. of a meeting place for Alabama manufacturers who want to get in touch with world buyers of munitions, armament and machinery. The point was made that unless the Southern manufacturer meets men of broad vision it is impossible to build up anything but a local trade.

This fact was given additional recognition by the Southern Furniture Manufacturers at a meeting of their association at Asheville, N. C., recently. The statement was made by W. A. Thomas that the way to get broader business handled in New York city was for the manufacturers to know personally all the exporters in New York. The personal acquaintance of the exporter was declared to be of first importance. They should be visited frequently so that they will be kept informed as to the activities of Southern manufacturers, and the manufacturers will be in position to receive any suggestions from exporters about the styles and patterns which may from time to time be in greatest demand.

There is no question about the soundness of Mr. Thomas' suggestion. Personal acquaintance with the possible purchaser of any manufactured article is a prime requisite to successful salesmanship. By all means let Southern men who have anything to sell become acquainted with the most important and influential purchasers in his line, no matter whether this involves occasional trips to New York, Chicago or anywhere else where the best purchasers are to be found.

LESS OF CHEAP POLITICS AND POLI- TICIANS AND MORE BUSINESS DE- VELOPMENT THE SOUTH'S NEED.

IN discussing the political conditions which in South Carolina and in other Southern States have wrought so much injury to this section, the Greenville (S. C.) News presents a survey of the situation which ought to be given careful consideration by the people of the whole South. In the course of its editorial the News says:

The crevasse in views was widened by politicians who sought their own personal success. It has been kept open by politicians of this same stripe. It will continue to be open and to injure the State until we see conditions as a whole, appreciate the views of the populace at large, and then set about to remove such causes for strife as now exist. The causes, such as they are, should not make for division, but they do. They are misunderstood.

In this State, as in others, particularly Southern States, politics is personal. It is not possessed of a catholicity of spirit. Politicians play upon the personal issues, stress the imaginary condition, and get by with their game because the people at large do not understand the other fellow's viewpoint or do not appreciate conditions. Men do not count the cost of factionalism. They do not see that the good of the State is hampered by the bitterness; that its happiness, its good disposition, its prosperity, are impaired by the blatant politicians and by the spirit which these office-seekers implant into their followers.

Let us avoid provincialism, get the viewpoint of the other man, and see what is worrying him. Once this is found, the cause, real or imaginary, for the worry can be done away with.

Before many more months this State will again be deluged with political matters. Much of the talk will be worse than worthless. The contests will be fought out along lines which have not as their first object the betterment of the State. The people of this State, and only the people, can conspire to prevent a repetition of conditions of the past. If the people determine to be thoughtful, be reasonable and seek first, last and all the time the good of the State, subordinating personalities, subordinating, perhaps, inclinations and bowing to reason and righteousness, the next campaign will not be fraught with rotten feelings and factionalism.

Every intelligent man in the South knows that this is a fair statement of a most unfortunate condition—a condition in which the people are being "worked" for the benefit of the politicians, an element which lives and thrives on strife and seeks only its own preferment. By stirring up constant intrigues of every kind this element seeks to arouse a mob spirit everywhere and on every subject, which is the curse of the life of the South.

This political element is the greatest load which the South has to carry.

The negro problem in all of its ramifications is not so great a hindrance to the broadest Southern development as is the curse of the politician in local, in State and, to a considerable extent, in national affairs. Until the people of the South, as differentiated from the politicians, refuse to be led and misled and hoodwinked by unscrupulous politicians, until the mob refuses to hurrah at every cross-roads gathering when the loudest-mouthed politician seeks to arouse a spirit of hostility and bitterness to everything that could make for Southern prosperity, this section will be cursed and burdened with a load that holds it back—a load which is worse than that of a living man chained to a dead body which he must drag forever wherever he goes. Every intelligent man, be he farmer, merchant, manufacturer, banker, mechanic or day laborer, knows that the Greenville News has stated the case accurately.

It is time for the politics of the South to cease to be personal, as suggested by the News. It is time for the politicians to cease to play upon personal issues and stress imaginary conditions.

EXPORTS OF COTTON AND COTTON OIL HEAVILY INCREASED.

DURING the first seven months of 1915, from January to July, inclusive, the South exported 2,220,000 bales of cotton more than for the corresponding seven months of 1914.

In the first seven months of 1914, prior to the beginning of the war, the total exports of cotton were 3,713,234 bales.

For the corresponding period of the present year, namely, from January to the end of July, notwithstanding the war, we exported 5,937,361 bales. In July, continuing this heavier cotton export business, we sent out 244,474 bales, or just a little less than double the quantity shipped abroad in July, 1914.

A striking comparison of the shipments of cotton and cottonseed oil by months for the first seven months of 1914 with the corresponding months of 1915 is as follows:

Months.	1914. Cotton. Bales.	1915. Cotton. Bales.	1914. Cottonseed Oil. Pounds.	1915. Cottonseed Oil. Pounds.
January	1,052,265	1,372,175	30,374,725	37,932,687
February	751,010	1,501,701	16,912,612	42,325,209
March	695,305	1,208,573	26,932,519	29,471,387
April	398,215	672,008	18,174,676	45,625,219
May	294,714	615,290	13,446,491	32,309,820
June	295,539	323,140	6,814,710	26,186,688
July	126,186	244,474	5,839,273	21,045,237
Total	3,713,234	5,937,361	118,495,006	234,896,247

During July the exports of cottonseed oil were 21,045,237 pounds, as compared with 5,839,273 pounds in July, 1914, the exports this year being three and a half times as much as the exports for the same month last year. The value of the cottonseed oil exported for the month was \$1,481,626, while for July, 1914, the value was \$462,996.

In mineral oils there was a decrease in July of over 14,000,000 gallons compared with 1914, and in breadstuffs a decrease of \$6,400,000. Meat and dairy products showed a gain for the month of \$11,500,000, and cattle, hogs and sheep advanced in the value exported from \$71,000 to \$1,253,000. These are interesting sidelights upon the exports of breadstuffs, cottonseed oil and animal products.

THE FIG INDUSTRY ADDING TO THE WEALTH OF THE SOUTH.

AN immense fig orchard and cannery in George county, Mississippi, now in successful and profitable operation, is another demonstration of the diversified industrial developments for which the South offers unsurpassed opportunities. Twenty-five hundred acres, located between Lucedale and Eubank, are owned by a company of Boston, New York, Philadelphia and Pittsburgh capitalists operating under the name of the Eubank Farms Co. There are now about 63,000 bearing trees in the orchard, and it is planned to set out 75,000 more during this season. The fruit ripens at varying times, so that the canning season is prolonged from July to October. The first planting came into bearing this season, and more than 50,000 small samples of fig preserves have been sent out to prospective customers. It is proposed to market the product not only in the United States, but in France and England as well. It is stated that it will require the services of more than 5000 people to gather the figs when the orchard comes into full bearing, and at that time the output of the cannery will be shipped by the carload lot.

This is a development that is possible of duplication in many other parts of the South, where almost invariably the fig finds soil and climatic conditions altogether favorable. In the vicinity of New Orleans there is considerable development of the industry, and several extensive preserving factories operate successfully at Houston. At San Antonio it is a matter of frequent occurrence for the owners of homes to have a number of fig trees on the grounds, and the women of the household take a special interest in gathering and preserving the fig, and even marketing the surplus product.

It is reported that a ready sale can be found at profitable figures for any fig preserves that are properly put up and attractively packed.

ESSENTIAL TO OUR OWN PROSPERITY.

DURING the fiscal year ended June 30 the leading customers for the products of American soil and factories were as follows:

United Kingdom.....	\$911,000,000
France	369,000,000
Canada	300,600,000
Italy	184,000,000
	\$1,764,600,000

Out of a total export trade for the year of \$2,716,000,000 these four countries took \$1,764,000,000. If to this were added the exports to other parts of the British Empire, the sum would be still further increased. But the four countries named took nearly two-thirds of our entire foreign exports.

Without these purchases almost universal bankruptcy would last year have been the lot of most of our cotton and grain growers and business interests. The ability of these countries to buy from us is essential to our own prosperity. If their ability were seriously curtailed, or they were compelled to buy elsewhere by reason of exchange conditions, or to do without the things we can furnish, our cotton and grain would go tumbling in price and other business interests would follow.

James J. Hill, than whom no man in the country is more intimately in touch with the business conditions of the West, while in New York recently said:

"The maintenance of a stable rate of foreign exchange, which can be done by the establishment in this country of a very large credit account for Great Britain to be drawn against for the purchase of foodstuffs, is of far more importance to the United States than to England. It is not too much to say that upon this the prosperity of the American farmer depends."

"It is most essential to the prosperity of our people that our wheat should go to market and find a purchaser, and if the sale of our wheat does not go forward steadily to the purchaser, the latter would certainly turn elsewhere if a more favorable rate of exchange gives him a better advantage in another market than ours."

What is true in regard to the wheat situation is pre-eminently true in regard to the cotton situation of the South. It is vitally important to cotton interests of this section that Great Britain shall be in a position financially to buy our cotton and to buy it freely.

These countries are our best customers, and, as stated, bought last year nearly two-thirds of all that we shipped abroad. In the aggregate they have been our best customers for generations. They have invested billions of dollars in this country and furnished the capital for much of its railroad and industrial development. They come now as our customers and ask that the financial interests of America shall co-operate with them in such a way as to enable them to continue to buy our cotton, our grain, our provisions and other products of the farm and the factory.

It is absolutely essential to the prosperity of this country that their request should be granted, and every business man, every manufacturer, every cotton grower and every grain grower in the United States is vitally interested in having the financial interests of the country co-operate with Great Britain and France in the plans proposed for making it possible for them to continue to purchase from us.

"AS A MAN THINKETH IN HIS HEART, SO IS HE."

AS a section thinketh in its heart, so will it be; If it cries "Poverty, poverty," it will continue poor. The individual who is always pitying himself is likely sooner or later to be the object of pity of everybody else. This is true of a section as well as of an individual. The South does not need to pity

itself any more than it needs to have the world's pity. It ought to be the most self-reliant section of the world, and when it takes that position in all of its affairs it will become the most prosperous.

Under the heading of "The Great Cotton Question" the Industrial Record of Texas emphasizes some of these points in a very interesting way, and says:

It has been charged, and not altogether unjustly, that the South is practicing a form of idolatry. In many portions of the South the sun rises and sets, flowers bloom and decay, vegetation thrives and perishes, but supreme to the vision, paramount to the pocketbook, even to the very vitals of life itself, cotton overshadows everything, is everything, and without it there is no happiness and no hope. Criticize it as we may, challenge it as we will, and yet this maker and destroyer of the South casts its leech-like tissues into the minds of men and holds them in complete subjection to its overmastering power.

Oh, how pitiful was the condition of the South last fall! It seemed that the God of the South had failed, and the cry of "Buy a Bale" went forth to the world. It sounded like the street beggar, "Buy a Pencil," "Buy a Cake of Soap," "Buy a Pair of Shoestrings." Without having the actual figures at hand, we offer to assert that all of the bales thus sold would not amount to more than was produced in some of our leading producing counties. Think of the South, so wonderfully rich in resources, even countenancing such movements as this!

A visitor through the South last fall would have thought that this country was at war, and not the European nations. King Cotton had deserted the country and calamity was upon the face of the land. In the South last year the estimated loss on the cotton crop was \$200,000,000—just enough to keep the war going for four days. Europe is spending twice enough each month to buy the entire cotton crop of the South.

It is a nice come-off to parade the impoverished condition of the South to the world in order to boost cotton prices. This certainly would have a splendid effect on the buyers. If the speculators thought the South just had to sell, is it not natural for them to wait until the prices had been forced to the lowest figure possible before making their scoop. Even then they would be doing the "poor" South a charitable act.

Will history repeat itself this fall? Will the grim specter of cotton again parade in gaunt attire this broad land of peace and plenty? Even now the cotton-price scare of last fall has been almost forgotten. The barns of the land are filled to overflowing and sleek cattle are grazing leisurely upon a thousand hills. Certainly the South will permit no dreamer to foister upon it a second time the chagrin of pauperism, and it would not have been played last fall except in an hour of uncertainty, when conditions were chaotic and the matter could not be viewed from the angle that now gives unobstructed vision.

RICHMOND'S PROPERTY VALUES INCREASE \$11,000,000 IN ONE YEAR.

THE city of Richmond, Va., is worth nearly \$11,000,000 more than it was a year ago, according to the figures of the Commissioner of Revenue for the city. The figures show that the assessed value of lands and buildings aggregates \$99,027,003, as against \$88,740,393 for last year. While some of this increase in assessed valuations is due to the annexation of outlying property, it is nevertheless a fact that Richmond has been steadily increasing in population and wealth in recent years, and it seems reasonable to believe that a large part of the \$11,000,000 increase is due to increasing values of property within the original city limits.

SOME FRUIT TREE! INSURED FOR \$30,000

IN view of the fact that the avocado or alligator pear industry is being extensively developed in Florida, it is interesting to know that out in California a tree of this variety is said to have been recently insured against wind and fire by Lloyds of London for \$30,000. This particular tree, which is located at Whittier, in Los Angeles county, according to the July Bulletin of the California Development Bureau, last year produced \$1500 worth of bud wood, in addition to 3000 pears, which averaged the grower 50 cents each, making a total production valued at \$3000 for the year. If this all be true, look out for Florida beating it in the future.

Amazing Progress in South's Grain Production Puts Grain Value Hundreds of Millions Ahead of Cotton

The total value of the grain crop of the South for the present year, based on the final yield of wheat and oats and the estimated yield of corn and on September 1 prices for these grains, is as follows:

Corn.....	\$1,047,679,000
Wheat.....	168,836,000
Oats.....	88,873,000
Total.....	\$1,305,388,000
Rice.....	25,000,000
All grain.....	\$1,330,388,000

The magnitude of this startling increase in the grain crop of the South is best indicated by comparison with the value of the South's cotton crop. The most valuable cotton crop ever produced was that of 1913-14, which, including the seed, was estimated at \$1,134,000,000. Thus the South's grain crop this year will exceed in value by \$196,000,000 the total value of the South's most valuable cotton crop.

We can, however, best get an appreciation of the value of this grain production and its influence upon the future of the South by comparing it with the average value of the South's cotton crop during the last ten years of high prices. For the ten years ending with the phenomenal crop of 1913-14, ignoring the later crop by reason of war conditions, the total value of the cotton crops, including seed, was \$9,350,000,000, or an average of \$935,000,000 a year. This year's grain crop of an estimated value of \$1,330,000,000, therefore, exceeds by \$395,000,000 the average value of the cotton crops of the South for the last ten years. This is one of the most striking facts in all the ramifications of the business interests of the nation at the moment.

The total yield of grain in the South for the year aggregates for wheat, corn and oats 1,598,000,000 bushels, and adding to this 26,000,000 bushels of rice gives a total for the South of 1,624,000,000 bushels of grain.

This is a gain of 346,000,000 bushels over the grain crop of last year, or a gain of 27.4 per cent. The increase in the entire grain production of the United States was 701,000,000 bushels, and of this 346,000,000 bushels was in the South. Against the South's gain of 27.4 per cent., the increase in the rest of the country was only 9½ per cent.

Two months ago, basing our estimate upon figures carefully compiled from the United States Department of Agriculture showing the probable yield of grain should July 1 conditions continue through the summer, we pointed out that the probable increase would be 292,000,000 bushels. This statement startled the country and caused widespread discussion throughout the North and West, as well as throughout the South.

In the review of the situation then given, it was said that these estimates as to corn production were based on July 1 conditions, and it was then too early to make a final estimate, but that the indications at that time

pointed to a crop of 1,181,635,000 bushels of corn for the Southern States.

From the report for September, just issued, a compilation shows that the estimate then made for corn was too conservative by more than 67,000,000 bushels; and the corn crop of the Southern States, based on the forecast of September 1, indicates a yield for this section of 1,248,201,000 bushels, or over 301,000,000 bushels in excess of last year's corn crop, while the yield of wheat was somewhat less than the indicated yield in July, the actual difference in the oat yield being triflingly small, or only about one-half of one per cent. from the July estimate.

The corn production of the South by States for 1914 and the forecast for 1915, based on conditions of September 1, are as follows:

State.	1915. Corn, bus.	1914. Corn, bus.	Increase in 1915.
Alabama.....	71,600,000	55,488,000	16,112,000
Arkansas.....	57,800,000	42,000,000	15,800,000
Florida.....	11,644,000	11,200,000	444,000
Georgia.....	64,900,000	56,000,000	8,900,000
Kentucky.....	120,100,000	91,250,000	28,850,000
Louisiana.....	50,600,000	38,600,000	12,000,000
Maryland.....	25,500,000	24,531,000	969,000
Mississippi.....	65,500,000	58,275,000	7,225,000
Missouri.....	207,900,000	158,400,000	49,500,000
N. Carolina.....	59,600,000	57,550,000	2,050,000
Oklahoma.....	123,100,000	50,000,000	73,100,000
S. Carolina.....	37,328,000	36,538,000	790,000
Tennessee.....	93,100,000	80,400,000	12,700,000
Texas.....	167,700,000	124,800,000	42,900,000
Virginia.....	62,600,000	39,380,000	23,220,000
West Virginia.....	29,229,000	22,692,000	6,537,000
	1,248,201,000	947,104,000	301,097,000

More interesting than the mere fact of the stupendous increase of over 301,000,000 bushels, or nearly 33 per cent. gain in a year, is the fact that this increase is general throughout the entire South. Alabama, for instance, shows a gain of 16,000,000 bushels. Arkansas comes forward with an increase of 15,800,000 bushels. The increase in Florida is nearly 500,000 bushels, and Florida authorities think that the national Government's figures for this year's production for that State are underestimated, and believe that the increase has been very much greater. Georgia has made a gain of 8,900,000 bushels. Kentucky

has made an increase of nearly 29,000,000 bushels, while Louisiana, which only a few years ago was scarcely ranked as a corn-producing State, has now advanced to a production of over 50,000,000 bushels, an increase of 12,000,000 bushels over 1914. Maryland, an old corn-producing State, shows a gain of a million bushels. Mississippi, like Louisiana, is rapidly coming to the front as one of the great grain-producing sections, and this year shows an increase of 7,000,000 bushels over 1914, the yield for the State being upwards of 65,000,000 bushels. Of course, Missouri, one of the nation's great corn-producing States, as usual comes forward with big figures. This time it shows a gain over 1914 of nearly 50,000,000 bushels. North Carolina produced nearly 60,000,000 bushels, a gain of upwards of 12,000,000 bushels over 1914.

The most astonishing increase in all the South is the gain in Oklahoma, where corn production jumped from 50,000,000 bushels last year to 123,000,000 bushels this year, though even that is not so significant, because Oklahoma is a great grain as well as cotton State, as is the general increase throughout the central cotton-growing regions of the South.

South Carolina increased its yield by over 700,000 bushels. Tennessee made a gain of nearly 13,000,000 bushels; Texas 43,000,000 bushels; while Virginia made the astonishing growth from 39,380,000 bushels to 62,600,000 bushels, an increase of over 23,000,000 bushels. In West Virginia the gain was 6,537,000 bushels.

This well-rounded increase in every Southern State is the most striking fact connected with this situation, since it shows that the turn to grain production is not confined to a few States, but is sweeping over the entire South.

More corn production means enriched fertility of all the land, more cattle, more hogs, more grass and a more well-rounded agricultural development, and thus a greater industrial progress.

The total production of grain by States for the year is as follows:

States.	Wheat. Bushels.	Corn. Bushels.	Oats. Bushels.	Total. Bushels.
Alabama.....	1,076,000	71,600,000	9,304,000	81,980,000
Arkansas.....	2,160,000	57,800,000	8,320,000	68,280,000
Florida.....	1,120,000	11,644,000	1,096,000	12,740,000
Georgia.....	3,129,000	64,900,000	16,096,000	84,125,000
Kentucky.....	8,620,000	120,100,000	4,726,000	133,446,000
Louisiana.....	50,600,000	2,299,000	52,899,000
Maryland.....	10,208,000	25,500,000	1,484,000	37,192,000
Mississippi.....	44,000	65,500,000	3,920,000	69,464,000
Missouri.....	34,108,000	207,900,000	33,359,000	275,367,000
North Carolina.....	11,267,000	59,600,000	5,384,000	76,251,000
Oklahoma.....	38,770,000	123,100,000	35,653,000	197,523,000
South Carolina.....	2,547,000	37,328,000	9,692,000	49,567,000
Tennessee.....	8,163,000	93,100,000	8,133,000	109,396,000
Texas.....	21,080,000	167,700,000	41,247,000	230,027,000
Virginia.....	16,674,000	62,600,000	4,622,000	83,896,000
West Virginia.....	3,900,000	29,229,000	3,219,000	36,348,000
	161,746,000	1,248,201,000	188,554,000	1,598,501,000

The total grain production of the South for the year as compared with former years is as follows:

Year.	Wheat. Bushels.	Corn. Bushels.	Oats. Bushels.	Total. Bushels.
1915.....	161,764,000	1,248,201,000	188,554,000	1,598,501,000
1914.....	169,056,000	947,104,000	138,381,000	1,254,541,000
1900.....	130,863,000	671,509,000	108,693,000	911,065,000

Here is a gain in the South of 344,000,000 bushels of corn, wheat and oats, to which should be added a gain of 2,000,000 bushels in rice, making 346,000,000 bushels increase in the grain crop of the South this year as compared with last year.

The total grain production of the United States, based on the September 1 forecast of the Agricultural Department as compared with the final yield in 1914, is as follows:

Total.	1915. Bushels.	1914. Bushels.
Wheat.....	981,000,000	891,000,000
Corn.....	2,985,000,000	2,673,000,000
Oats.....	1,408,000,000	1,141,000,000
Barley.....	223,000,000	195,000,000
Rye.....	44,000,000	43,000,000
Buckwheat.....	18,000,000	17,000,000
Rice.....	26,000,000	24,000,000
	5,685,000,000	4,984,000,000

These figures show a gain in the grain crop of the country of 701,000,000 bushels over the yield of last year. Of this total gain, 346,000,000 bushels, or nearly one-half, is in the South.

The aggregate value of the wheat, corn and oat crops of 1915 by States, based on September 1 prices, is as follows:

States.	Value of Corn-Oats-Wheat for 1915, based on Sept. 1 prices.
Alabama.....	\$74,818,120
Arkansas.....	56,216,000
Florida.....	10,948,160
Georgia.....	76,381,860
Kentucky.....	107,235,400
Louisiana.....	46,275,460
Maryland.....	33,566,280
Mississippi.....	58,765,960
Missouri.....	211,692,600
North Carolina.....	75,153,810
Oklahoma.....	137,418,530
South Carolina.....	46,965,520
Tennessee.....	92,621,720
Texas.....	162,318,330
Virginia.....	81,410,680
West Virginia.....	33,600,090
	\$1,305,389,540

From every angle from which these facts can be viewed they mark a tremendous change in the South's agricultural condition and give promise of a continued growth in diversified farming, which will bring to this section a prosperity that it never knew in the palmier days of the highest price of cotton. Cotton is an exhausting crop—exhausting to the soil and in some ways exhausting to the life of the South. Grain, and the cattle which follow grain, enrich the soil, strengthen its vitality and fertility, diversify the activities of the South, and broaden every line of human activity for the betterment of this section.

Let the South preach grain and cattle production. Let it continue with increased activity this new energy in grain growing, and great and boundless will be its future wealth.

WHO CLAIMS THE CAP CAN WEAR IT.

FOR a third of a century the MANUFACTURERS RECORD has been an unceasing advocate of high prices for cotton. It has during all of that period proclaimed in every way possible the importance to the cotton grower and to the South of good prices for cotton, and it has antagonized every effort of speculative bears in New York or elsewhere to beat down the price of cotton. But, despite this unceasing third of a century campaign, there are one or two Southern papers which have been trying to create the impression that the MANUFACTURERS RECORD has not been a believer in high prices for cotton.

Their efforts in this direction are merely for the purpose of trying to offset the statements of the MANUFACTURERS RECORD that the South could not afford to sell its honor for cotton, and that it could not afford to be posed before the world as a whining suppliant for charity.

These papers remind us of an old, old story. It runs thus:

An old farmer came into town one day and visited the office of the county newspaper. He told the editor that he and his wife had long been trying to decide as to what to do with his son, who had reached an age where it must be decided as to his future work.

"Well," said the editor, "have you thought about making a farmer of him?"

"Yes," said the old man, "but knowing that it takes a good deal of brains and very hard work to make a farm pay, we have come to the conclusion that the boy would not do for a farmer."

"How about trying law or medicine?" asked the editor.

"He hasn't brains enough," said the father, "for either job, although I know there are a lot of doctors and a lot of lawyers that succeed without much brains."

After he had tried various other suggestions, the editor said: "What have you and the boy's mother had in mind? Have you thought of anything that might possibly suit?"

"Well," said the old farmer, "the boy is such a darn fool that we have thought of making an editor of him."

We are afraid that boy and his prototype have got into the office of one or two Southern newspapers.

A FEATURE OF A FLORIDA NEWSPAPER THAT IS WORTH COPYING.

THE Tampa Times has a feature on its editorial page which other Southern newspapers might very well afford to copy. Nearly every day in the year the Times prints in a prominent position on its editorial page the news of the day's developments in South Florida. Brief paragraphs announce some fact showing great activity in developments, the announcement indicating the progress which South Florida is making from day to day. Herewith is a sample taken from the issue of September 7:

ONE DAY'S DEVELOPMENT ITEMS IN SOUTH FLORIDA.

Messrs. Pope and Thompson establish a rice and grist mill at Wimauma. This is the first mill of the kind established in that section.

Government soil survey shows remarkable fertility and versatility of Hernando county soil.

Forty cars of brick have been shipped to Thonotosassa for use on the Tampa-to-Thonotosassa road.

Assessed valuation of Clearwater property is shown to be \$1,700,548.

Sebring ships four carloads of cattle to the West.

Lakeland is making elaborate preparations for the entertainment of delegations to the convention of the Central Florida Highway Association, which will be held next Thursday.

It is announced that two-thirds of the citrus fruit growers of Osceola county are now affiliated with the Florida Citrus Exchange, and the packing-house at Kissimmee is being prepared for operation.

Every man who has ever visited the West Coast of Florida can pick out items of interest in this summary of one day's activities. For instance, the man who has ever motored from Tampa to beautiful Thonotosassa Lake, with its wonderful orange groves, will, as he reads of a proposed brick road, have a vision of the almost impassable sand through which he slowly plugged his way, and now look forward with delight to a trip where brick is succeeding sand.

A HIGHLY DESERVING EFFORT TO HELP THE WAR SUFFERERS.

MR. A. E. STILWELL has founded in Paris an organization whose object is to bring relief to the people of the devastated districts of France, Belgium, Poland, Serbia, and also Italy if the need arises there. Mr. Stilwell is well known in this country as the builder of the Kansas City Southern and the Kansas City, Mexico & Orient railroads. He has devoted much of his life work to aiding and educating the young and the poor, and being at present a resident of Paris he has been brought in

close touch with the awful misery now existing among the victims of the war in Europe.

His plan of operation is to publish in Paris a monthly magazine to be called "The Resurrection," which will be printed in English. The price is \$1.25 a year, and in writing the MANUFACTURERS RECORD he explains that there will be a profit of about 20 cents on each subscription, which will take care of some little child for five days. He is desirous of securing subscriptions throughout this country, and asks that each reader who may become interested will pass the information along to friends so that an endless chain may work in behalf of a subscription that will take care of from 5000 to 10,000 little children as long as their necessities require outside assistance. Arrangements have been made by which famous writers, composers and artists in all parts of the world will contribute their services to the paper, which will be a medium through which the numerous societies now battling with poverty and suffering can make known to the world their noble work. Each subscriber to "The Resurrection" becomes a member of the League of Hope and will receive a unique and interesting monthly magazine, besides aiding a most worthy cause.

"The Resurrection" will be a historical review, giving the thrilling story of the barbarous work of the war, and thereafter a still more fascinating account of the rebuilding and the "resurrection" which must occur in the war-swept nations of Europe.

Those who are inclined to assist in this needed work of help for the widow and orphan victims of the war can send a postal order for \$1.25 or a New York, London or Montreal draft to "The Resurrection," 26 Avenue de l'Opera, Paris, France.

MR. EDISON'S VIEWS ON THE NECESSITY OF PREPAREDNESS FOR NATIONAL DEFENSE

HENRY FORD in his recent statement that he proposed to spend a million dollars for a peace propaganda said:

Mr. Edison will never use his great brain to make anything which would destroy human life or human property.

This would not have been given a moment's consideration so far as Mr. Edison is concerned but for Mr. Ford's well-known intimacy with him. On the appearance of this statement of Mr. Ford's the editor of the MANUFACTURERS RECORD wired to Mr. Edison, and, quoting the statement of Mr. Ford, said:

In view of the present situation of our country and of the need for preparedness against the possibility of war, the MANUFACTURERS RECORD would greatly appreciate a statement from you as to whether your position is correctly stated by Mr. Ford, and if not correctly stated we will be glad to have anything on the present situation you can wire us. * * * In view of your position as chairman of the Advisory Board of the Navy, it would be wholly out of place, however, to ask for a denial of the statement credited to Mr. Ford were it not that Mr. Ford is known to be such an intimate friend of yours and his prominence in the business world gives standing to what he says. I trust, therefore, that you will not feel it out of place on our part to ask for the privilege of publishing from you a denial of Mr. Ford's widely-quoted statement.

In advance, however, of our telegram the Ledger of Philadelphia had wired Mr. Edison, and in reply received from him the following:

I do not agree with Mr. Ford or Mr. Wanamaker. Neither do I believe in a large military establishment.

"But I do believe from the facts before us that we should have in stock more up-to-date war machinery and ammunition manufacturing capacity than any other nation ever had or will have, with plenty of trained officers and drill sergeants, and then take a chance that we can put the men behind this machinery should we be invaded."

This emphatic statement in reply to Mr. Ford's visionary pronouncement ought to be accepted by the country as the thoughtful view of Mr. Edison, who is chairman of the Naval Advisory Board. He believes "that we should have in stock more up-to-date war machinery and ammunition manufacturing capacity than any other nation ever had or will have."

It would seem to be proper for Mr. Henry Ford to make an apology to Mr. Edison and to the country.

Business Conditions in the South and Southwest Broadly Reviewed

CONCLUSION REACHED THAT THESE SECTIONS ARE ABOUT TO ENTER THE BEST AND MOST PROSPEROUS EPOCH IN THEIR HISTORY

By BEVERLY D. HARRIS, Vice-President National City Bank, New York.

[Mr. Beverly D. Harris, vice-president of the National City Bank, New York, was until recently an official of a leading bank in Houston, Tex., and has had for years an intimate knowledge of conditions in the South and Southwest. Being qualified to give an expert opinion, the following review of the business situation in those sections, furnished the Manufacturers Record on request, will be found of timely interest and importance.—Editor Manufacturers Record.]

In the course of a trip through the Southwest, from which I have just returned, embracing the extensive territory covered by the States of Texas, Louisiana, Arkansas, Missouri, Kansas, Oklahoma, Colorado, Utah, Nevada, California, Arizona and New Mexico, I have had a very good opportunity to observe at close range present conditions extending over the whole of that large area, and to become in a great measure conversant with the opinions and views of many of those most prominent in the financial and industrial activities of that section.

Responding, therefore, to your request, it affords me pleasure to briefly summarize the result of these observations.

Certainly the most striking thing in the present situation is the remarkable contrast with conditions prevailing a year ago. The extreme tension of money conditions then existing has long since been succeeded by an era of entirely opposite conditions, with low interest rates and money so plentiful as to be redundant. The tremendous issues of emergency currency have been retired; the open market for commercial paper—at that time deadlocked—has along with this sudden revulsion gone to the other extreme, and notwithstanding the remarkably low current rates has been unable to attract sufficient desirable commercial paper to nearly supply the demand; the stock and commodity exchanges have long since resumed their usual functions, and, in short, the entire credit and financial machinery of the nation has not only entirely recovered, but it is doubtful if it was ever at any time in such an exceptionally strong position as the present. It is a fact of the greatest importance that our foreign trade balance, then heavily against us and a serious cause of disturbance and alarm in the financial situation, has veered around to an unprecedented and increasing balance in our favor; the general level of prices of livestock, hides, grain, sugar, copper, zinc and other important products has advanced to a highly profitable basis; the cotton situation—a year ago regarded as deplorable—has greatly improved, and on the present economic position of the staple advancing rather than declining prices appear most probable, if carried along and intelligently marketed; ordinary revenues have been largely augmented from war orders; it is the same country, the same fertility of natural resources, bountiful crops, whose value runs into the billions; the same people—yet, notwithstanding the great crops about to move, extraordinarily low interest rates and the abundance of money in the banks—notwithstanding there is no inflation of credit and very little speculation in all this great territory—in short, with every basic condition of soundness and prosperity, the bankers and business men when interrogated will tell you that business has been slow and unsatisfactory—though now showing improvement—that real estate values, lumber and building materials are depressed; there has been and is a slowing down of building and new enterprises; more or less unemployment; a stagnant market and slow demand for stocks, bonds or any kind of investments. Yet in sections where money is nearly always scarce and dear the banks are not only not rediscounting heavily as usual in advance of the crop movement, but are actually, in a surprising number of instances, in surplus funds and complaining of a lack of legitimate demands for the employment of these funds.

Throughout all of this territory bank reserves are abnormally large, deposits holding up well, and the country as a whole is owing less money proportionately than at any similar period within my experience. The truth of this is reflected in the very remarkably light demands on the big Eastern money centers for usual seasonal accommodations, by the low interest rates prevailing and the extremely high figures of bankers' balances carried at main centers.

In my opinion, the reason business is not better and these conditions exist can, at the present time, be attributed only to uncertainty of mind, lack of enthusiasm and confidence among the people generally. It is not that there was visible anywhere within my observation any conditions of an acute or distressing character. The masses of the people are all managing to get along tolerably well; indeed, the average individual undoubtedly owes less and is in a better position to meet his obligations than in more active and prosperous times. Following the opening of hostilities in Europe the trying conditions which ensued in this country made a profound impression on the minds of the people, resulting in marked and general economies. For months credit in the Southwest was closely restricted and debtors pressed for payment. As a consequence, the people consumed less, bought less, traded less, wasted less and, for lack of money and credit, very much less than ordinarily went into the purchase of luxuries and non-essentials. This thrift among the people, however, did not help the volume of business done by the merchants, which has languished in consequence and conditions to quite a considerable extent—and in some lines particularly—have been more or less depressed and unsatisfactory.

Irrespective of curtailed credit and hard times the country went right ahead and produced its crops as usual, at perhaps half the expense of ordinary years, owing to the methods of thrift and economy forced upon the people. Very much less money, in consequence, is owing, and very much less has gone out to pay for outside purchases. With these conditions and little going on in trading, speculation or new enterprises, the reason is seen for the accumulation of bank reserves, the reduction of debts and the easy money conditions prevailing. It is also apparent, if the bountiful crops produced this year are marketed at anywhere around present levels, there will be an unusual liquidation of debts and an unusual money surplus in this territory as a whole. The underlying conditions of business, in my opinion, are on a much firmer footing than they have been for many years. The universal depression and contraction of credit coincident with the outbreak of hostilities in Europe—as bitter and drastic as the experience has been—were, as a matter of fact, a timely and necessary corrective for a situation which was becoming overexpanded and dangerous. While the war brought this to a head, it was inevitable, as credit had become too cheap, the people as a whole were spending too much money and living beyond their means, and there was a large and constantly-growing mass of credit in the country which did not liquidate at the times and seasons when it should. The people as a whole were spending too much money on extravagance, doing too much business on credit, and renewing or postponing obligations that should be liquidated. The real money went out to pay for luxuries and extravagances as well as for necessities, leaving the "due bills," slow and uncollectible accounts and the oft-renewed paper. That condition—the antipodes of the present—was unwholesome, difficult of remedy and menacing to all financial and commercial institutions.

Nothing is needed, however, but better credit methods and more thrift—as the experiences of the last 12 months have proven—to rapidly overcome a condition of this kind and get on a safe footing. This section is a big producer of wealth, and the average man is straightforward and a good moral risk. Nothing but drastic conditions will arrest a general era of over-expansion and over-spending. It is a very good thing that this has taken place and is now behind us. Looking to the future, the country has undoubtedly profited tremendously by the experiences of the last year and the lesson taught by them.

The greatest benefits to this section will arise from improved agricultural methods, diversification and rotation of crops, better marketing methods, better co-operation among all classes, better credit methods and the impetus to thought, among all classes, on economics, cause and effect; and the improvement of methods generally.

The South and Southwest, in my opinion, are getting on a sounder credit footing than ever before, and my feeling is that these sections are about to enter the best and most prosperous epoch in their history. I look for a great advancement in population, wealth and the average conditions of life within the next decade. One of the important factors in this will be a greater abundance of money and cheaper average interest rates.

This territory produces real wealth—the consumable commodities which the world must have, and with better methods in the future is bound to become very rich and populous. Conditions, in my opinion, are now distinctly on the upgrade, and the outlook never more consistent for a return to real, genuine prosperity on a rock-bottom basis. Someone has facetiously said, "The business of this country has been drowning in a sea of gold!" It certainly is amazing that it is so slowly convalescing, when every natural condition appears to exist for a revival by leaps and bounds. The answer is, as I have said before, unquestionably largely a state of mind at this time, and this owes its origin in the minds of different people to different causes. As Bob Ingersoll has tersely remarked, "People with differently-shaped heads will always think differently on all subjects—love, politics, war or religion"; and, moreover, it is only natural now, at a time when the utmost variance appears to exist among the wisest and most experienced heads as to the duration, result and economic consequences of the war, the ultimate effects of our new tariff, currency, trade commission and other laws, the outcome of our present foreign exchange situation, the problems of European government finance, the effect of continued war conditions on the marketing of and reimbursement for our principal products, and many other vital and mooted questions, that the public mind is frankly unable to diagnose the situation ahead and can only feel its way along step by step.

In traveling over this territory I found in the minds of many people an apprehension that we would ultimately be drawn into the war, with panic and disturbance to business. Many are apprehensive of conditions ahead affecting the export of our cotton and other commodities and the reimbursement therefor.

There are those who attribute the stagnation to politics and government and to the effects of too much "trust-busting" and railroad and corporation regulation. The number of railroads which have gone into the hands of receivers, with the combined mileage of these roads, and the significance of the situation, has had a very depressing effect. The times have not been good for making money, obtaining support for new enterprises or selling property, and the general scale of prices of real estate and other investments has been lower, with a dull and lagging market—all of which have added to the mental depression. The great lumber manufacturing industry—very important to this section—has been very hard hit by the general depression, the plight of their best customers, the railroads, and the curtailment of exports, and this depression is likely to continue until there is a general revival all along the line. Personally, I attribute the state of the public mind to a combination of all of the foregoing causes; nor should it be forgotten that the country has only recently emerged from one of the most trying ordeals through which it ever passed, and the memory of which is still fresh in mind.

My observation is, however, that everything has been slowly working back to normal for sometime, and in the future I think I can see much improved methods and increasing prosperity.

Is the South Doing Its Best? If Not, How Can It Achieve More?

No. 1.

The growth of the wealth of Kansas and Iowa and a number of other States whose natural advantages are inconsequential as compared with the South's, makes it important that the people of the South should fearlessly and honestly study what this section has accomplished in comparison with what other sections less favored by nature have achieved.

In this study there may be found difficulties and handicaps which can be removed. The South should take stock; it should thoroughly investigate its progress as compared with the progress of other States in material and educational growth. The self-satisfied individual or section will never make much progress. Sometimes introspection as well as retrospection is essential.

Are we of the South achieving as much as we ought to accomplish in a region more richly favored by nature with resources for the creation of wealth than any other region known to man? If not, what is the cause? Let us be honest with ourselves.

The editor of the *Manufacturers Record* recently contributed to the *Atlanta Constitution* an article setting forth the heroic work of the men who are leading in Southern development and the burden they are forced to carry by reason of many disadvantages due to the emigration from the Central South between 1865 and 1900 of about 5,000,000 native-born whites, whose going drained this section of much of its best life-blood to enrich other sections. Attention was called to the political agitation throughout the South, much of which has been a curse to this region, and to the waste of about \$600,000,000 a year on alcoholic drinks, which, though perhaps not larger proportionately than the waste for the whole country, is a greater burden to this section than to the North and West because of their greater relative wealth. That the South is making a heroic struggle in favor of prohibition, and in many ways is leading in this work, is fully appreciated; but the very fact of the negro's presence in the South and of the difficulty in enforcing prohibition where many political influences are working in favor of whiskey, and where in many cases reputable people themselves break the law and connive at its being broken by others, is a heavy handicap.

If the men who are leading the South in agricultural and industrial development, the men of far-seeing power, of tireless energy and of great constructive ability, had behind them the united support of all interests and all the people, what marvels in material and educational progress could be achieved!

If in a study of itself and of what other less favored States are doing the South can catch new inspiration for more united work on the part of all the people, it will be possible to make the progress of the last twenty-five years seem small by the side of the progress of the coming years. The article written for the *Atlanta Constitution*, which presented some of the disadvantages under which the business leaders of the South have to carry their burden of developing this section, called forth so many letters of commendation, with many requests for its republication, that with this explanation we give it herewith and follow it with a few letters concerning the facts stated, from some of the foremost men of the Central South. This article and the letters published today will be followed by some additional facts contrasting the progress of some Southern States with the progress of Western States, with a view to quickening the thought of the South to a deeper interest in the utilization of our Heaven-given opportunities.

[From *Atlanta Constitution*.]

SOUTH NEEDS MORE ENERGY AND OPTIMISM.

By RICHARD H. EDMONDS, Editor *Manufacturers Record*.

Among the troubles that afflict the South, or burdens that hamper it and hold back its material development as compared with what it ought to achieve, are a few that stand out conspicuously, and while most of them are likewise found in other sections, they are not so powerful for evil elsewhere as in the South, because of the greater wealth and material progress and the freedom from the negro question found elsewhere.

The South needs more energy, more driving force and more self-reliance in business and more sanity in politics than other regions, because of its more backward condition. It has, on the contrary, less of all these things in proportion to population than others. It is, therefore, doubly handicapped. It has many men the equal in energy and ability of any others in the world. Without such men it could never have wrought what has been done. It has many public men of the highest qualities and statesmanship, but the proportion of both is smaller than elsewhere, due in part to the heavy emigration in former years from the South, and to the large negro population. The strong men, therefore, have to carry a double burden of responsibility in business development and in public affairs.

The South has too much rotten politics in county, municipal, State and National affairs. It has too many incompetent and out-of-date county officials who hold position by virtue of a corrupt machine. It has too many men in public life who know no more about business or economic questions than the devil does about paradise.

South Drinks Too Much.

The South drinks too much whiskey, spending probably \$600,000,000 a year or more on alcoholic drinks that ruin body and soul and help to make drunkards who become fit fiends for the devil's work. It likewise wastes undue millions on every variety of so-called soft drinks which, as a whole, benefit neither body nor mind.

Around soda fountains gather too many people, young and old, whose aggregate expenditure for unnecessary things that harm rather than help aggregate many millions of wasted money.

The South, which needs backbone and self-reliance more than any other section, permitted its politicians and some of its papers last fall to pose this section before the world as a land of Lazarus-beggars exposing their sores to the country, because, for a few months, it could not sell its cotton crop at profitable prices. Nothing except the most heroic work and the broadest expenditure of money by everybody interested in the South's advancement will ever efface from the country's mind that lamentable picture of the South as a cringing beggar asking others to give it alms by buying a bale of cotton at 10 cents a pound, when it was selling in the open market at nearly half that price! This is a stain upon the South's character for sturdy self-reliance and strength which it will take years to wash away. And yet it was not the doings of the real South or of the real newspapers of the South. The real South, however, has to carry the burden and wipe out the stains. The stain-makers are busy at some other job for their individual benefit.

Fights Its Development.

The South hampers and fights the interests which alone can bring outside capital in large amounts to develop its latent resources. Hundreds of thousands of people in the South are lacking profitable employment because of the spirit of hostility which kept from this section capital that could have been brought here in great abundance.

Protection was denounced, not argumentatively, but viciously, as a foe of the South when the South needed a protective tariff far more than any other section. "Give us free trade," said many politicians who knew nothing of what they talked, and "we will compel the 'tariff-maintained' iron industry of the North to move to the South."

Poor, ignorant fellows! Little they knew that a protective tariff was far more essential to the life and growth of the iron industry of the South than to that of other sections.

"We need no ship subsidies, for other nations will carry our commerce cheaper than we could develop our own merchant marine," was the cry of many politicians and many papers, and the unthinking, unheeding mob applauded. The louder the shouting, the more vigorous the ranting against those forces that alone could develop all our broad, yea, our limitless potentialities, the wilder the applause by those who blindly preferred to follow blind leaders into the ditch.

By Way of Illustration.

A true story aptly illustrates the tale. A young preacher, rather noted for his ability to make a noise with his mouth, when he started on his ministry was given a bit of advice to this effect: "Whenever you get stage-fright and lose the thread of your sermon, just pound on the pulpit and shout and keep on pounding and shouting until you get your bearings again, and then some good old sister will come up and pat you on the shoulder and tell you what a great sermon you preached." Shortly after this the young preacher was asked to supply the pulpit of a very important church one day. He was embarrassed by the situation, and in the midst of his sermon suddenly forgot his story, but remembering the advice, he pounded first on one side of the pulpit and then on the other, and shouted out words that had no connection, though they sounded big. Presently the thread of his sermon came back to him, and when he left the pulpit at the close of the service a good brother, not "some good old sister," patted him on the shoulder and said: "That was a great sermon, brother; I didn't know it was in you to preach like that."

Many of our public men in local, State and National affairs have pounded and yelled when they had nothing to say—often they started their mouth a-going and then forgot to stop it, and the unthinking crowd patted them on the shoulder and yelled themselves hoarse in approval without one clear idea as to what had been said, or as to how little truth was in it. The real constructive leaders, the upbuilders of the South who are carrying its business and financial burdens, often grow weary under such circumstances.

It Can Be Saved.

Nevertheless, the South must be saved from its own blind leaders. Its real men, its strong papers, and its great business interests must once more come to the front as never before and take on new courage and with redoubled energy seek to broaden Southern development and bring in new capital and new people, and thus strengthen the hands of those who are making a great fight to redeem this section from the evils that burden it and carry it forward to a far higher plane of material and educational advancement. The goal is worthy of the highest aspirations and the most untiring energy of everyone who realizes the unlimited potentialities of this favored land.

The "buy-a-bale-at-10-cents" movement last fall, which placarded the whole nation with please to "help the South," has cost this section many tens of millions of dollars. Every daily paper in the South has felt its influence in lessened outside business, because people of other sections thought the South was too poor to buy anything; every railroad has felt it, every merchant and manufacturer has had lessened profits by reason of it, and hundreds of thousands of laborers have had to pay some of the penalty. Heroic work alone can now turn the situation and put the South back where it stood in the world's estimation before the cry "Please help the South" had made its deep and lasting impression on other sections.

Redoubled energy and enterprise, optimism in action and not in words only, and broad expenditures by individual business concerns in liberal home advertising and by cities, States and corporations, despite the present conditions and in face of these conditions, is now more necessary than at any time since 1865.

Are the people and the corporations of the South broad enough to measure up to the situation?

Among the letters received in commendation of this article are the following:

MR. WALKER PERCY of PERCY, BENNERS & BURR,
Attorneys,
Birmingham, Ala.

Editor *Manufacturers Record*:

In the course of a conversation with Mr. George G. Crawford, president of the Tennessee Coal, Iron & Rail-

road Co., would be like him at opportu- nities and more need than that yours letter he times has from you South. I ulty of m am drop article in can peop servation during th marvelou have long cans, and Mere fau of the So talking.

Editor M I am i views of Constitut the sad l only corp be citizen Hopin questions the nation

Editor J Mr. E count of coupled crally, w more tha ductive o will neve the two South" a ties" will same, fo our soci politician least in out exce sary to ing direc catering endeavor value re The a greater merchan pronounc reform, nized as the spiri terest, ing to a the indic can if p edly the

Editor J Mr. E been in South, a that Mr building from his 1 full

road Co., this morning, I stated that, in my opinion, it would be very helpful if some of the men in this section like himself, who commanded public confidence, would at opportune moments point out to our people their defects and shortcomings. That flagellation was perhaps more necessary to stimulate our people to better efforts than flattery. In response he handed me an article of yours published in the Atlanta Constitution and the letter he had written with reference to it. I have at times had the opportunity of listening to short talks from you with reference to industrial progress in the South. I have never heard any man who had the faculty of making statistics more intensely interesting. I am dropping you just a line to heartily commend the article in the Constitution above mentioned. The American people are disposed to be too self-satisfied. Observation of what has been going on in the Old World during the war has been intensely interesting. The marvelous efficiency of Germany, which many of us have long realized, should be instructive to all Americans, and particularly to the people of our section. Mere fault-finding is not helpful, but I think the people of the South do need from time to time a bit of plain talking.

JOHN S. JEMISON,
Manufacturers' Agent,
Birmingham, Ala.

Editor Manufacturers Record:

I am in sympathy and full accord with Mr. Edmonds' views of the South's condition (as given in the Atlanta Constitution), and too much stress cannot be laid upon the sad lack of energy and optimism for the good of not only corporate interests, but the individual, whether he be citizen or countryman.

Hoping for your continued interest in this and other questions of incalculable value to the South, as well as the nation, I am.

EDWARD L. THOMAS,
President of the Thomas Grate Bar Co.,
Birmingham, Ala.

Editor Manufacturers Record:

Mr. Edmonds' letter is a timely one, and, on account of his recognized friendship for the South and coupled with his superior knowledge of conditions generally, will arrest attention wherever seen and produce more than a passing thought, consequently will be productive of much good; but, in the writer's judgment, it will never be received enthusiastically, for the reason the two indictments as to "too much drinking in the South" and "too much graft and demagoguery in politics" will stop the press from enthusiastically heralding same, for too many of them are too closely allied with our socialized barrooms, disguised as clubs, and our politicians are all conscious of the fact that they are at least in bad company, and it would be unethical to cry out except in extreme cases, and only then when necessary to save themselves politically, the indictments being directed to our leaders, who are really bedfellows, catering to and preying upon that horde that is ever endeavoring to take from those who have, without giving value received therefor.

The appeal will be received by two classes—the greater one, our conservative business men, bankers, merchants, manufacturers and capitalists, who are never pronounced leaders, never taking the initiative in any reform, while the lesser class, but few in number, recognized as good business men but overzealous, would catch the spirit of the appeal and do their best to arouse interest. But the load they would have to carry in arousing to action their conservative friends and converting the indicted leaders would prove a herculean task, but can if properly directed be accomplished, and undoubtedly the start has been made from the right source.

BIRMINGHAM SLAG CO.,
Birmingham, Ala.

Editor Manufacturers Record:

Mr. Edmonds' article most certainly displays a very keen insight to condition prevailing throughout the South, and especially in my section. Everyone knows that Mr. Edmonds' whole heart and soul is in the upbuilding of the South, and that any adverse criticism from him is made in the interest of this section.

I fully concur in everything he has said, and could

only add something with reference to finance, which likewise is holding our beautiful country back.

It seems to me that the banks and other money interests throughout the Southern States pursue a conservatism entirely too harsh, and do not show a liberality in loans as is the case in both the East and West. Of course, I realize that in some few instances the apparent lack of liberality is due to certain State redemption laws, but this does not obtain in but a very small section of the Southern States, yet the depression seems to be quite general.

JAMES BOWRON,
President Gulf States Steel Co.,
Birmingham, Ala.

Editor Manufacturers Record:

The natural man resents being preached to except on Sunday. He has the privilege of going to sleep in the pew, or of thinking about his business, and forgetting the sermon after he goes home. It seems to me that the average American always feels that he is as good as anybody else—if not better—and you cannot tell him anything and expect him to heed you and to mend his ways.

I have lived in the South 38 years. During all that time I have stood for development, hard work, the avoidance of alcohol, protection for American industry, the maintenance of gold standard, the avoidance of debt and the dropping out of national politics in municipal affairs, and I have even preached the same with reference to State affairs. I have not hesitated, like Mr. Edmonds, to lift up my voice, both on the platform and in the press and in private conversation at all times everywhere.

What has been the result? Only the day of judgment can reveal whether there has been any. I know that in this city there are 2000 or 3000 people who are in sympathy with the Republican views of business, but they are afraid to say so. They are compelled to swallow the free trade, free silver, anti-corporation views which are characteristics of the Democratic party during the past three decades, and even though in their souls they hope for the success of the Republican doctrines, they are afraid to come out into the open and say so. They say when I argue with them that they are not afraid of personal insults, or of being annoyed, but unless they follow in the train of the Democratic party they will have no voice in matters of legislation. "Questions of taxation may come up and we will have no influence," so it has resolved itself into this, that a candidate for office, either municipal or State, proclaims not his own experience as a man of business, his success and opportunities for acquiring knowledge fitting him for administrative position, but his faithfulness to the Democratic platform! I believe that I, with innumerable friends in this city, and the recipient of countless courtesies, could not be elected to the humblest office, because I decline to enter a Democratic primary.

Now, just so long, in my opinion, as the South declines to allow business men who are Republicans, and who, in fact, form the majority of the successful business party of this country, to have any part in public affairs or in shaping the public policies of the South, this section of our country will limp. It will hobble where it ought to run.

The differences between the two parties today are purely fiscal and economic, and should admit of the most courteous and frank discussion on the part of the best men on either side, so that the people might be educated and public affairs might be supported and administered by the best men available in any community. It seems impossible to divest the mind of the Southern people of the memory or the ghost of negro supremacy, although the negro vote today is negligible, and does not amount to more than from 1 to 2 per cent. of the entire population, and the white men of the South possess the numbers, the votes, the wealth, the intelligence and the prestige. The negro laborer neither pays a poll tax nor registers as a voter. The memories of the war have faded, and if he were a voter today he would just as likely vote the one ticket as the other, and it is absurd in the highest degree that Southern progress and advancement should be in any way determined by this specter of the past.

And yet, after 38 years' unbroken residence in the South, I am compelled to believe that it will require still another generation before our Southern people

throw down the bars and vote for men according to their ability rather than through party loyalty, and cut loose from the traditions of the past to give their energy to the development of the high and splendid future which the natural wealth and beneficent climatic conditions of the South would justify.

G. W. CONNORS,
President and General Manager Connors-Weyman
Steel Co.,
Birmingham, Ala.

Editor Manufacturers Record:

There are few men in the South who have done so much as Mr. Edmonds toward its upbuilding along correct lines. For many years his eloquent voice and gifted pen have done much for her material progress. He knows the South's possibilities, its progress, as well as its shortcomings, and is capable of giving the people proper advice, which has been done in his article. I am heartily in accord with everything in his Constitution articles, and beg to urge its wide distribution.

The enormous amount of liquor consumed in the South has always been a great detriment. It has also suffered greatly from rotten politics. One of the greatest mistakes she has ever made is her free-trade policy. No section of our country needs a protective tariff as much as the South. The influence of many politicians and many newspapers have led us in the wrong direction by not telling the whole truth. This Mr. Edmonds does fearlessly, and the wide circulation of his article will go a great way toward setting us right. The thinking business men of our section will, I am sure, unite with me in an expression of the deepest gratitude for his able article, which will undoubtedly benefit the South in proportion to its circulation. Few men and fewer journals have done and are doing more toward the proper upbuilding of the South along right lines than Mr. Edmonds and the MANUFACTURERS RECORD.

J. I. McCANTS,
Manager of Sales, Standard Portland Cement Co.,
Birmingham, Ala.

Editor Manufacturers Record:

I think the statements made in the Atlanta Constitution by Mr. Edmonds are correct from every standpoint, and I wish to recommend most heartily that you give the matter wider distribution.

C. J. HADEN,
President Georgia Chamber of Commerce,
Atlanta, Ga.

Editor Manufacturers Record:

I have the profoundest admiration for Mr. Edmonds and his great work for the South. In the main, his analysis is true as the Decalogue. But in generalizing across 13 States, he has failed to differentiate. In the matter of temperance, Georgia is abreast of any part of the Union. While we have too much politics, I will challenge any State to show a lower graft average. During 34 years of residence in Georgia I have never known a serious charge of corruption against any State-house official, and the number of instances of defalcation in county and city offices have been extremely rare. Contrasted with the States of New York and Pennsylvania, Georgia's record is almost spotless.

We use the slogan "business above politics," but do not put it into full practice. Any attempt to deprive us of one Congressman would precipitate a revolt, but our political adversaries at a distance may quietly take away from us through the channels of trade \$100,000,000 annually for goods which we might and should buy at home, and nobody makes any noise about it.

Through excessive conservatism we follow too closely the footprints of our fathers. If they paid 20 per cent. more for inferior Western timothy hay than the home-grown, more nutritious, pea-vine hay costs, then out of habit we must go on doing the same thing. Our Southern hospitality is too zealously practiced toward alien-made goods.

Perhaps our master mistake is one we inherited. In other times, and for one-half a century, the energies of our people were strained in politics to defend the slavery system against the menace of politics. Politicians have aggravated our traditions that prosperity is lost or won by legislation. The persistent increase of food crops and industries in Georgia prove that whatever else

other Southern States may do or think, Georgia is awaking to the truth that prosperity comes through thrift.

Mr. Edmonds' powerful sermon is fully justified. I hope he will continue, even if he deems me a pharisee in the audience who passes the gospel over his head on to the publican in the next pew.

From one of the foremost business men of the South, Southern by birth and sentiment, and who ranks among the greatest leaders in this section, the MANUFACTURERS RECORD has a letter bearing on the Constitution article, with the request, however, that the name of the writer should not be made public. From this letter we take the following extracts:

"I believe it was Seneca who said that no man is so dangerous as one who has just enough knowledge to excite his pride and not enough to cure his ignorance. As a Southern man, it is with extreme regret that I state my belief that a large percentage of our population is of exactly this class. I have been in many parts of the world, but never in one where I could start an argument more easily with an adversary who knows nothing whatever about the subject, and you can start it anywhere in the South without any trouble. The average man thinks he has a knowledge of many things about which he knows absolutely nothing whatever except superficial statements that he has read he does not know where.

"If there was anything that could be done which would make the Southern people more modest and humble with respect to their knowledge and make them willing to learn from those who know, we would have a foundation upon which a fine superstructure of economic efficiency could be erected. I have despaired of ever accomplishing results through the use of words. It seems to me that as a section we can only learn through example—that we do not learn through precept."

Soya Beans as an Oil-Making Product.

In view of the increase in the production of soya beans in the South, especially in Florida, which ought to open up a very large field for the utilization of these beans for oil-making purposes, it is interesting to have a survey of the condition of the industry in Manchuria, the chief producer of soya beans in the world. A report on this subject just issued by the Department of Commerce, Washington, says:

"Soya beans are the principal export from North Manchuria. During 1914, 268,025 tons of beans were exported from this consular district via Vladivostok and 26,648 tons were exported by way of Nikolaiefsk. Of this quantity, 90,000 tons went to Japan and the remaining 204,673 tons were exported to England, Denmark, Germany and Holland. The average price of beans f. o. b. Vladivostok was \$31.98 per ton. The 1914 crop was 20 per cent. larger than that of the previous year, but on account of the difficulties of transportation caused by the war a large percentage of the crop remained unsold at the end of the year. At Vladivostok alone 36,112 tons of beans remained unshipped on December 31, owing to the insufficiency of steamer facilities, but the bulk of the unsold beans remained with the growers and dealers in North Manchuria. It was expected that with the opening of the Sungari River in the spring a large proportion of the crop left over could be shipped via Nikolaiefsk, as the river steamers would be eager for cargo and their freight charges low; but the continued scarcity of ocean-going steamers to take cargo from Nikolaiefsk has been unfavorable for the bean exporters, and the market remains somewhat depressed.

"The production of bean oil is still in a primitive state. Three small oil mills employing machinery instead of old-fashioned Chinese presses produced 2,880,000 pounds during the year. A much larger mill, equipped with modern machinery, the construction of which was halted by the war, is expected to begin work in the autumn of 1915. In addition to these mills, there is a kind of distillery, which takes the crude bean oil and converts it into oil specially suitable for paints. The output of this distillery during the year was 1,080,000 pounds. The average price of ordinary oil in 1914 was \$3.24 per pound; the average price of light-colored oils for paints was \$0.062 per pound, and for dark oils \$0.048."

Developing a New Oil and Gas Field in Texas

BIG GAS WELLS BROUGHT IN NEAR CORPUS CHRISTI, AND OIL PROSPECTING IN PROGRESS—A WILD GASSER STILL UNCONTROLLED.

Regarding the report that a wild gas well has been burning since last December at a point near Corpus Christi, Tex., Mayor Roy Miller of Corpus Christi furnishes some interesting information about this well and also tells of the bringing in of another big well in the White Point gas field. Mayor Miller's letter, which follows, also speaks of the prospecting work that is being done by oil companies in that section in the belief that a large oil field will be discovered somewhere in that part of the coast country.

That the gas well at White Point has been burning since last December is true. The gas strike occurred unexpectedly at a depth of about 2165 feet, and the blowout followed immediately with such a force that the entire drilling outfit and casing were altogether destroyed. White Point is located due north of Corpus Christi, on the north side of Nueces Bay, about six miles in a straight line from Corpus Christi. Yet despite this distance the roar of the escaping gas could be distinctly heard in this city. Within a few days after the blowout a large crater formed around the well, and since that time a smaller crater has formed inside of the larger one. The first crater is probably 25 feet deep and about 125 feet across, while the smaller crater on the inside of this one is about 20 or 25 feet deep, and probably 50 or 60 feet across. At the bottom of this crater the mud and water constantly boil as the gas escapes, and the last time I was over there the gas at the bottom of this crater was burning.

The blowout occurred right at the edge of the high bluff overlooking Nueces Bay. Within a few days gas began to issue from two crevices on the side of this bluff, both of which are probably a hundred yards from the well. When I was at the well last, about a month

ago, the gas issuing from these crevices, which was ignited several months ago, was still burning, and it is my understanding that it is burning yet.

It is really a remarkable phenomenon, and I will endeavor to send you some photographs which will enable you to understand it much better than I can explain it.

As to the quality of the gas, I cannot at this time give you any official information, but I have been reliably informed that an analysis shows 1063 British thermo heat units. Concerning the quantity of the gas, there is absolutely no question. About 30 days ago another gas well was brought in about three or four miles east of the White Point blowout, and the owner of this well, C. L. Witherspoon, an experienced oil and gas operator, claims it has a capacity of 40,000,000 feet per day.

Mr. Witherspoon has applied to our City Council for a franchise to furnish Corpus Christi with natural gas, but before considering his application we have requested him to provide us with an analysis of the gas and an expert's statement as to the probable supply. We will, no doubt, have this information within the next week or ten days, and I will then be glad to give you the benefit of it.

As above stated, there seems to be no question about the natural-gas supply. As to whether or not an oil field will be developed is something which cannot be determined in advance of the completion of the development work now under way. Some of the largest companies in Texas are now putting down test wells, and the consensus of opinion seems to be that a large oil field will be discovered somewhere in the immediate vicinity of Corpus Christi.

Revival of Interest in Western Kentucky Fluorspar, Lead and Zinc Mining.

Louisville, Ky., September 2—[Special].—Much activity is being shown in transactions in ore-bearing land in Crittenden and Livingston counties, which lie along the Ohio River east of Paducah, and which contain rich deposits of fluorspar, lead and zinc. This activity is in part due to the improvements in the mechanical processes for separating the various kinds of minerals; also to better prices and to the other developments of the section. The railroad bridge which will be built across the Ohio River at Metropolis, Ill., will help to overcome what has been the biggest of the handicaps, the necessity of the long hauls.

All over the ore-bearing section mines which had been abandoned are reported to be in process of reopening, while in some cases owners or leaseholders are merely working over the old heaps of waste, fluorspar and lead together, which is being sold. Something like 12 mines are reported to be in operation, and options are being taken up all over the county wherever the ore is known to be present.

Fluorspar has been the objective for the operations heretofore. The State Geological Survey estimates the production in 1912 at about 16,000 short tons. Occasionally the spar crops out on the surface, and can then be followed easily, in some cases working into zinc sulphide and a greater or less percentage of galena is manifested.

At Marion, which is the county-seat, there are two mills in operation night and day. The Kentucky Fluorspar Co. at Marion has a 75-ton mill at which the company not only grinds the product of its own mines at Mexico, but buys and grinds other ore. The other Marion mill is that of R. L. Moore & Co., which has a capacity of 50 tons. Both of them are working night and day.

One of the biggest operators is a broker, George Roberts of Marion, who buys everything brought to that market, which is on the Illinois Central Railroad. One recent shipment of fluorspar from Marion of 100 tons was consigned to the Heath steel plant at New Castle, New South Wales.

John R. McLean, the newspaper publisher, who owns one of the big properties across the Ohio River in one of the Southern Illinois counties, is beginning a development near Mexico, putting up a mining plant and mill at an outlay of \$50,000.

A great drawback to the mining industry in this section of the State is the customary long wagon haul over indifferent or bad roads. In the Illinois district across the river the producing mines are located on the Ohio River, with practically no haul, while on the Kentucky side the cost of the wagon hauls is estimated to average in the neighborhood of \$2.25 a ton. However, it is felt that if the promises of the mining field are realized railroad extensions will be made.

A Significant Movement of Northern Families to Georgia.

The Herald of Albany, Ga., makes the statement that a colony of 50 white families has been secured for Dougherty county through the efforts of the Farmers' Land Loan & Title Co. and John H. Mock, secretary of the Chamber of Commerce of Albany. The colony will come to Albany from Chicago, and the first installment of 15 families will arrive and be located on their lands by the first of December.

It is regarded as a matter of considerable importance that a colony of this size should have been attracted from a point as far north as Chicago, and it is reported that Dougherty county considers this the most significant movement which has been made in behalf of that county since the Civil War.

Contractor for Edison Plant.

The Electric Development Co., Cumberland, Md., built the Edison Electric Illuminating Co.'s \$400,000 plant recently completed at Cumberland. This plant was briefly described and illustrated by a photographic view in the MANUFACTURERS RECORD of August 26.

A NEW RESIDENCE FOR A SOUTHERN CAPTAIN OF INDUSTRY, INDICATIVE OF THE CHARACTER OF IMPROVEMENTS NOW BEING MADE IN THE SOUTH.



R. J. REYNOLDS' NEW RESIDENCE, WINSTON SALEM, N. C.

An accompanying illustration presents a view of a notable new residence under construction at Winston-Salem, N. C., for R. J. Reynolds of that city. The structure consists of a main building 100x52.6 feet and two wings 75x27 feet and 75x25 feet, respectively. It is fireproof throughout, being of hollow tile and reinforced concrete, with exterior walls of brick stuccoed and having a tile roof. The main building will contain a large two-story reception hall, living-room, dining-room, four

bedrooms, four bathrooms and four sleeping porches, while one wing will contain two studies, three bedrooms and bath. In the other wing will be kitchens, pantries, serving-rooms, three bedrooms and two bathrooms. A direct and indirect steam-heating system will be installed, the indirect working with a fan system and air washer. Electrical devices will be employed for lighting, cooking, etc., and an electrical passenger push-button elevator installed.

Plans and specifications were prepared by Charles Barton Keen of Philadelphia, while C. N. Langley of Winston-Salem is the contractor in charge. Among the contracts awarded are the following: Hollow tile work, A. S. Reid & Co.; exterior millwork, A. Wilt & Sons; both of Philadelphia; cut-stone work (granite), Lemmerman & Hoffman, Mt. Airy, N. C.; cut-stone work (limestone), John Diebold Sons Company, Louisville; structural and other iron work, Gehret Bros., Bridgeport, Pa.

A Bank's Broad Work for Developing Live Stock Industry

By WM. R. TIMMONS, Secretary Rock Hill Chamber of Commerce.

The story of how the bank-bull movement in South Carolina had its beginning is an interesting one. Ira R. Dunlap, cashier of the National Union Bank of Rock Hill and chairman of the agricultural department of the Chamber of Commerce, was sitting at his desk one day when an enthusiastic farmer patron of the bank came in and incidentally told Mr. Dunlap that there was such a demand among the farmers for the use of his bulls that he was thinking of placing them in the hands of eight or ten of his friends in different parts of York county. This gave Mr. Dunlap the idea that has revolutionized cattle raising in South Carolina. He asked himself the question, Should the people of this section be allowed to use the bulls mentioned, which were more or less scrubs?

The more the bank thought of this matter the more decided was its conviction that if the farmers had access to pure-bred cattle, cattle raising could be made one of the most profitable industries of the section. Consequently he persuaded his directors that it would be a good investment if the bank should buy ten A-1 thoroughbred Hereford bulls and place them in as many different parts of the county to be used free by the farmers. The bank has done this, and already splendid results are showing themselves. The bank gets no revenue whatever from the \$1500 investment, but it is confident that it was a wise move for it, and that in the end the bank will share with the farmer in the increased prosperity resulting therefrom.

The news of this patriotic service to the community has spread over the State, and Dr. W. W. Long, whose whole time as State Government Agent and Director of Extension is devoted to such matters, has advised other banks to follow the example of the Rock Hill bank. As a result it is expected that about 500 bulls will be bought by different banks all over the State. The effect on the cattle industry of South Carolina of this liberal policy is resulting in a revolution in the type and number of cattle bred.

York county is peculiarly fitted to benefit from this

increased interest in cattle, since Rock Hill is known far and wide as the alfalfa center of the Southeast, there being more alfalfa in the county than in all the balance of the Carolinas combined. This feed is unsurpassed for pure-bred cattle, while it is not the best for the poorer breeds and scrubs.

The bank referred to above is to be commended also for its forward step in the matter of pure-bred hogs. Mr. Dunlap persuaded his directors, who were very dubious, indeed, as to the wisdom of the course, that it would be a good thing if the bank would offer to any farmer a pure-bred hog at cost, lending him the money to pay for same, whether he could give any security or not. The result was that a large number of farmers were started on the road to prosperous hog raising who would otherwise have been unable to make a beginning. Incidentally, the bank hasn't lost a penny of the money loaned out on such unprecedented terms.

Rock Hill is proud to have been the pioneer in this co-operation between the financial interests and the farmers, and the fact that interest has been awakened over the entire State repays the Chamber of Commerce and others for the money and energy expended.

Virginia Marl for Fertilizer.

A daily capacity of 2500 tons of marl for fertilizer is proposed by the James River Marl Fertilizer Co., incorporated to develop marl property on the James River about six miles from Smithfield, Va. This company is capitalized at \$150,000, and its officers are: L. C. W. Page, president; Ernest R. Page, vice-president; W. S. Weber, secretary-treasurer; Geo. E. Hobbs, manager; all of Norfolk, where the corporation has its main offices. It is reported that the company's property is estimated to contain 5,000,000 tons of red marl, averaging 85 per cent. of lime and 15 per cent. of other fertilizer properties. The initial plant will comprise digging and crushing machinery.

The Manufacturers Record—A Great Trade Journal Devoted to the Upbuilding of the South.

(Facts and Figures, Jacksonville, Fla.)

Some great writer has said, "Show me the kind of books a man reads and I will show you the kind of man he is," and nothing truer was ever written. The most successful merchant today is the man who reads most and is best informed on the many and varied vital questions which have either a direct or an indirect bearing upon his own particular line of business.

Upon the prosperity, not merely of the South, but of the country at large depends to a great extent the well-being and success of any local enterprise of moment. It is not only of importance but of positive necessity to the wholesale grocer that he should keep abreast of the development of the country and the methods and plans that are being evolved in the development of its financial, commercial and industrial resources. The narrow-minded, self-centered jobber must in time, and is even now, giving way to the well-informed, alert, reading merchant, who, because of an informed mind, is able to contrast the present with the past, and therefrom, in a measure at least, intelligently prognosticate the future.

In the interest of better and more successful merchandising in the Southern States, Facts and Figures has continuously advocated a reasonable amount of intelligent, well-selected reading by our merchants, and with that thought in mind we are prompted to direct their attention to the Manufacturers Record, published in Baltimore, a publication which, in our opinion, would represent an asset to any business man on whose desk it might be found each week, dealing as it does in an intensely interesting and at the same time terse and intelligent manner with matters of direct and vital interest to the American business man. And just here let it be understood that we are prompted to make these comments in the interest, not of the Manufacturers Record, but of our Southern merchants.

These articles regarding publications which we may write from time to time are not offered in the sense of advertising, but are printed by us voluntarily and without remuneration or consideration of any kind from those publications to whom we make reference.

Some Railroad Construction Work, Terminals, Depots, Piers and Bridges Under Way in the South

Great expenditures are being made by transportation companies in the South for the enlargement of their facilities, and the several articles presented in this issue of the Manufacturers Record describe and illustrate a few of these notable improvements, such as the big station and terminal which the Trans-Mississippi Terminal Co. is building at a cost of about \$5,000,000 for the Texas & Pacific Railway and the Missouri Pacific-Iron Mountain Lines at New Orleans; the docking and wharf accommodations which the Ocean Steamship Co., a subsidiary of the Central of Georgia Railroad, is building at Savannah at a cost of \$1,000,000; the \$1,000,000 bridge which the Chesapeake & Ohio Railway is erecting over the Ohio River on its northward extension from Kentucky to Columbus, and the big bridge and other improvements at Memphis, costing in the aggregate about \$5,000,000. Even these few pieces of construction represent an expenditure totaling about \$12,000,000, this not considering the 28 miles by the Chesapeake & Ohio Railroad from the river to a point near Columbus and which will cost \$3,500,000 more.

But this aggregate is only a small portion of what the lines have recently done or are about to accomplish. For instance, there is the completion of the first unit of the Finley Yard of the Southern Railway at Birmingham, which cost \$661,000 and which will be enlarged as soon as the demands of traffic make it necessary; the construction of an 85-mile extension of the Seaboard Air Line from Charleston to Savannah just begun and to cost several millions of dollars; the award a week or two ago of construction contracts for new shops for the Seaboard at Portsmouth, Va., at a cost of \$500,000; the letting of several million dollars' worth of double-tracking contracts by the Southern Railway in Virginia, North Carolina and South Carolina; the completion lately by the same company of a large coal-handling plant at Charleston for the export shipment of fuel; the building of the Paducah & Illinois Railroad Co.'s bridge, known as the Burlington bridge, to cost \$3,000,000, across the Ohio at Metropolis, Ill., and which will connect the Burlington system with the Nashville, Chattanooga & St. Louis Railway via Paducah; extensive yards being also constructed on the Kentucky side of the river for the accommodation of the interchange freight over the new route between the South and the West and Northwest. Then there are the two coal piers to be built at Baltimore by the Baltimore & Ohio and the Pennsylvania Railroads, each to cost about \$1,000,000.

A great bit of work finished this summer was the electrification of about 30 miles of the Norfolk & Western Railway between Bluefield and Vivian, W. Va., to handle the heaviest coal traffic over heavy grades on its way to tidewater, and which has fully realized expectations in the matter of economy of operation and increase of operating capacity. The opening to traffic of the Carolina, Clinchfield & Ohio Railway's extension to Elkhorn City, Ky., must also be remembered. It cost \$5,500,000 and required several years to build, and down at Dallas, Tex., there is under construction a \$5,000,000 passenger terminal for the use of all the railroads entering there, while the Louisville & Nashville has ordered 43,000 tons of steel rails and the Atlantic Coast Line 20,000 tons. These and various other betterments of different degrees of magnitude are now in progress, affording encouragement and promise of general improvement in industry and enterprise. They show that despite many handicaps the railroads of the South are preparing for great things in the future.

New Railway Terminals at New Orleans

WORK WELL ADVANCED ON \$5,000,000 PASSENGER AND FREIGHT STATION OF TEXAS AND PACIFIC AND ALLIED LINES

Work is rapidly progressing on the new terminals of the Texas & Pacific and allied lines at New Orleans. Upon a tract of land adjoining the old station of the Texas & Pacific Railway the Trans-Mississippi Terminal Railroad Co. is building a commodious and imposing passenger station and two freight stations, one for inbound and the other for outbound freight. The new terminals will be used by both the Texas & Pacific and

the Missouri Pacific-Iron Mountain lines. The accompanying pictures show the passenger depot as it will appear when complete and the freight stations as they are in process of erection. The cost of the entire improvements, including the land, will be approximately \$5,000,000. E. J. Pearson, vice-president of the Texas & Pacific Railway, and president of the terminal company, has general charge of the work. J. W. Thompson

of St. Louis is the general contractor. Favrot & Livaudais of New Orleans are the architects.

The site of the new terminals is bounded by Annunciation, Race and Terpsichore streets and the Mississippi River. Between Terpsichore and Thalia streets are the old station buildings, which also abut upon the river.

Construction upon the passenger station is in its preliminary stages. The foundations, which rest upon piles, have been laid and the first work upon the erection of the walls is being done. This edifice will front upon Annunciation street. It will be built of granite and other stones, including limestone, which will be appropriately ornamented and surmounted with a cornice and a parapet balustrade.

The drawing shows that the doors in the center open into the principal waiting-room, 100 feet long by 65 feet wide. Adjoining this on the right is the waiting-room for colored passenger, 65x47 feet, to which entrance will also be had directly from the street through the large doorway shown in the illustration. The large door to the left of the main entrance opens into a spacious dining-room. Also adjoining the main waiting-room on the left is the waiting-room for women. To the right is the ticket office and the baggage checking room. A private bathroom is one of the modern conveniences provided for ladies. Lunchroom, cigar and newsstands, etc., will be conveniently placed in close relation to the main waiting-rooms. The concourse between the waiting-rooms and the train platforms will be 234 feet long and 34 feet wide. On the Thalia street side will be an ample porte cochere for the convenience of passengers arriving and departing in automobiles, carriages, etc. There will be five gates affording entrance to trains. The baggage-room will immediately adjoin the concourse.

The general construction of the station will be steel and reinforced concrete, fireproof throughout, as will be the two freighthouses. Italian marble wainscoting, with verde antique base, will provide decorative effects for the interior of the station. The floors will be laid in light gray marble English vein. All the woodwork will be selected mahogany, and the grillwork will be of bronze. A thorough system of ventilation will insure fresh, pure air at all times within the building. Steam will be employed for heating. The lighting arrangements will also be complete and beautiful. Self-cooled drinking fountains will be conveniently set, and in suitable positions will be connected clocks giving standard time.

At the foot of Terpsichore street a new railroad incline is being constructed and will connect the terminal tracks with the transfer steamers of the railroad company. It will be 300 feet long, and will have six steel girders, each 50 feet long.

Work on the two freight stations is almost complete. The outbound station fronts on Annunciation street, at the corner of Melpomene street. It is 40 feet wide and 818 feet, or nearly three blocks, long, extending toward



TEXAS & PACIFIC PASSENGER STATION AT NEW ORLEANS.

the river parallel with Melpomene street. A platform eight feet wide extends the entire length of the building. Nearby, and parallel with Terpsichore street, is the inbound freighthouse. It is 70 feet wide, and also fronts on Annunciation street; its length is 600 feet. A platform eight feet wide runs the whole length of the

There will be eight tracks in the space between the two stations, with an island platform midway, with movable platform connections to the platforms in the buildings.

Before the erection of buildings and the construction of yard and station tracks was undertaken considerable

The offices in the building are occupied by departments of the Iron Mountain, Louisville & Nashville, Nashville, Chattanooga & St. Louis and Union Railway companies, by the superintendent of Pullman service and by the Memphis Union Station Co.

The building was planned in the office of the chief engineer of the Louisville & Nashville Railroad Co., Louisville, by John A. Galvin, architect, and was built by the Murch Bros. Construction Co., St. Louis, for the Memphis Union Station Co., a company composed of the Louisville & Nashville, Nashville, Chattanooga & St. Louis, Southern, Cotton Belt and Iron Mountain railways, who use the station jointly. F. N. Fisher of the first named is president of the station company. The cost of the building was \$600,000.

The concourse leading to the trains is above street level, and the grading and filling was done under contract. There are eight main tracks and four side-tracks, which run away from the station south to Broadway, a distance of four city blocks. Broadway runs east and west a distance of three miles, and contains eight rights of way, one, unoccupied, belonging to the city, one to the Louisville & Nashville and Nashville, Chattanooga & St. Louis, two to the Southern, two to the Frisco and two to the Union Railway Co., which is the Belt Line, composed of the Missouri Pacific-Iron Mountain lines.

The other station, the Grand Central, as it is termed by Memphians, is at the corner of Calhoun avenue and Main street. It is a steel structure, with concrete foundations, eight stories and basement, the first three floors having a Bedford stone face and the five upper stories being of hydraulic press brick, with terra-cotta trimming and cornice. The building is 100 feet square, and within that area 1005 wood piles were sunk to support the foundation. The building was planned by D. H. Burnham, architect, Chicago, and was built by the James Alexander Construction Co., Memphis, under the supervision of the engineers of the Illinois Central Railroad, for whom it was erected. They are the sole occupants of the business offices. They have their own telegraph system and interior telephone system, pneumatic tube conveyors and vacuum cleaning system, and the station is wired for the installation of the muselophone—a train calling device—whenever its addition is desired. The cost of building construction was \$540,000, and with the land value and construction of elevated tracks and train shed the total valuation is placed close to \$1,000,000. The station is used by the Illinois Central, Rock Island, Frisco and Yazoo & Mississippi Valley roads. There are 10 main tracks in this station.

The Illinois Central road began in 1913 the building of their Nonconah yards at the south end of the city of Memphis, and a bare six months have elapsed since their completion. Here is where close to another million dollars were spent. The yards have an extent of two miles, and there are 51 tracks in it, including a hump. There are two receiving yards, two classification yards and a hold yard. There is a 20-stall roundhouse, turntable, repair shops and machine shops, and already the company is preparing to spend \$250,000 more on a concrete and steel car shed.

Also at Nonconah is the plant of the Railways Ice Co., which leases ground from the railway and supplies ice under contract for icing cars. Of late the banana trade has been diverted at Jackson, Miss., so that all the bananas shipped have been coming through this city.

In North Memphis the city is engaged in the operation of a pumping plant and the building of a levee against the encroachments of the Mississippi River. Inasmuch as this levee extends along the right of way of the Illinois Central road, beginning at or near Poplar avenue and running a mile or thereabouts northward, the city and the railroad are working together. The city has put in the sheet steel piling with the retaining walls on top, while the railroad is doing the filling and laying its track on top of the levee at an approximate cost of \$75,000. The city's work is under the direction of J. H. Weatherford, city engineer.

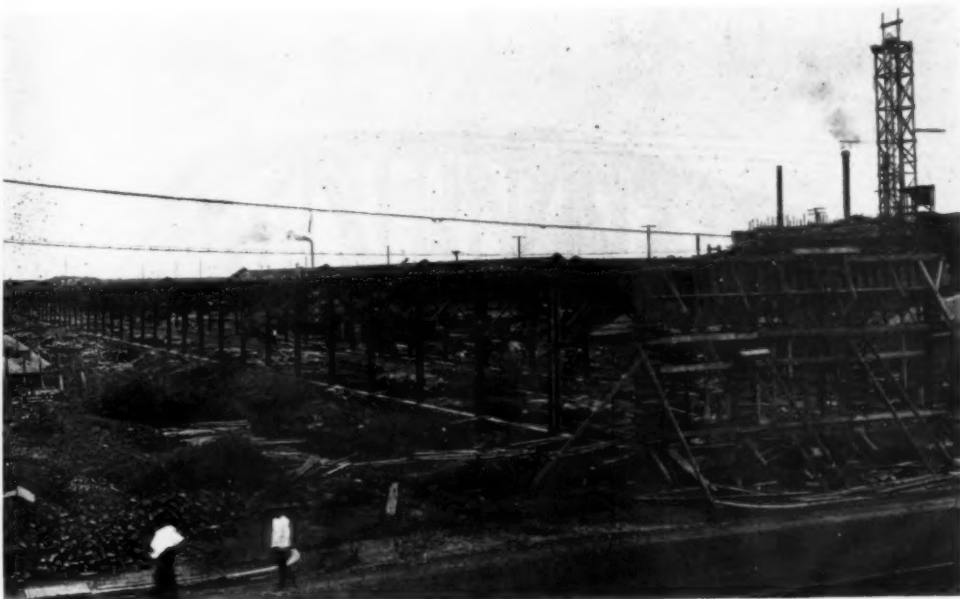
At the east end of Memphis, a few hundred feet beyond the city limits, are the new Forrest yards of the Southern Railway. Within a space of 400 feet in length there are 14 miles of track. There were required 3,700,000 cubic yards of grading, and altogether the road spent \$700,000. The yard was finally opened for business on September 1. Here are a receiving yard and classification yard; an 18-stall roundhouse; a 90-foot turntable, electrically operated; a coaling station and a coal-stor-



INBOUND FREIGHT STATION, TEXAS & PACIFIC TERMINAL.

structure. There is a second story built over 212 feet of the length of this station, and there will be located the offices of various officers, including the division superintendent, superintendent of terminals, local freight agent, trainmaster, dispatcher, etc. Reinforced concrete, steel and brick are the materials employed in their construction.

work had to be done to drain and pave the yards. This included the paving of several streets and the installation of adequate sewers and minor outlets to take care of storm water, etc. There was laid about five miles of subsurface drains. The paving amounted to 20,000 square yards of small granite blocks and 15,000 yards of creosoted wooden blocks.



OUTBOUND FREIGHT STATION, TEXAS & PACIFIC TERMINAL.

Millions Being Spent in Memphis for Improved Railway Terminals

[Special Correspondence Manufacturers Record.]

Memphis, Tenn., September 10.

There was a time when the visitor alighting from his train in Memphis found himself in the abyss of Poplar avenue or the desolation of Calhoun avenue. Nor does it seem so very long ago that the first of the two new passenger stations was opened for general use, although as a matter of fact it has been in use for more than three years, though the second one has not yet been occupied one year.

The Memphis Union Station is located on Calhoun

avenue a short distance east of Main street. It is a handsome structure, two stories high, with a basement floor on the street level, facing 300 feet on Calhoun avenue and having a depth of 100 feet. The entire exterior is faced with Bedford stone, with a Vermont granite base. The main waiting-room is approximately 50x100 feet, with a 60-foot ceiling, and is constructed entirely of ornamental terra-cotta. It makes a splendid appearance, and, of course, is equipped with all the details that go with a modern passenger station.

age yard, equipped with electric hoisting apparatus and a repair shop. Grade crossings have been eliminated for a distance of a mile and a half; three underpasses were built by the railroad, the grading of streets being made by Shelby county, and the railroad also erected a steel footbridge over the tracks.

At the old Charleston yards of the Southern Railway, which are only four or five blocks from the heart of the city, the company built a viaduct 200 feet long and 63 feet wide over the depressed tracks to carry Madison avenue, the principal east and west street. The city and the street railway company each bore a share of this cost.

More than a year ago a new bridge was started across the Mississippi River by the Arkansas & Memphis Railroad Bridge & Terminal Co., composed of the Rock Island, Cotton Belt and Iron Mountain lines. This was to require an expenditure of \$5,000,000. Then in the fall of 1914 money market conditions interposed an obstacle to its continuation, and work stopped. Within

the last day or two work has been resumed. This will be a railroad, wagon and foot bridge, and will bring Crittenden county, Arkansas, to the business doors of Memphis. This section is reputed to have a wonderfully good cotton soil, and the advantages to both sides of the river will be remarkable.

A great change is apparent in Memphis as compared with five years ago. New office buildings, mile upon mile of street paving, the taking away of grade crossings by the construction of underpasses, a handsome county courthouse, and now the enlargement of freight-handling possibilities through the Forrest and Nonconah yards and the bringing of Arkansas into the city, as well as the splendid and commodious arrangements for train passengers, give to Memphis some new talking points in addition to those she has been loudly proclaiming for years—"The largest hardwood center in the world"—"The largest inland cotton market in the world"—to say nothing of bananas.

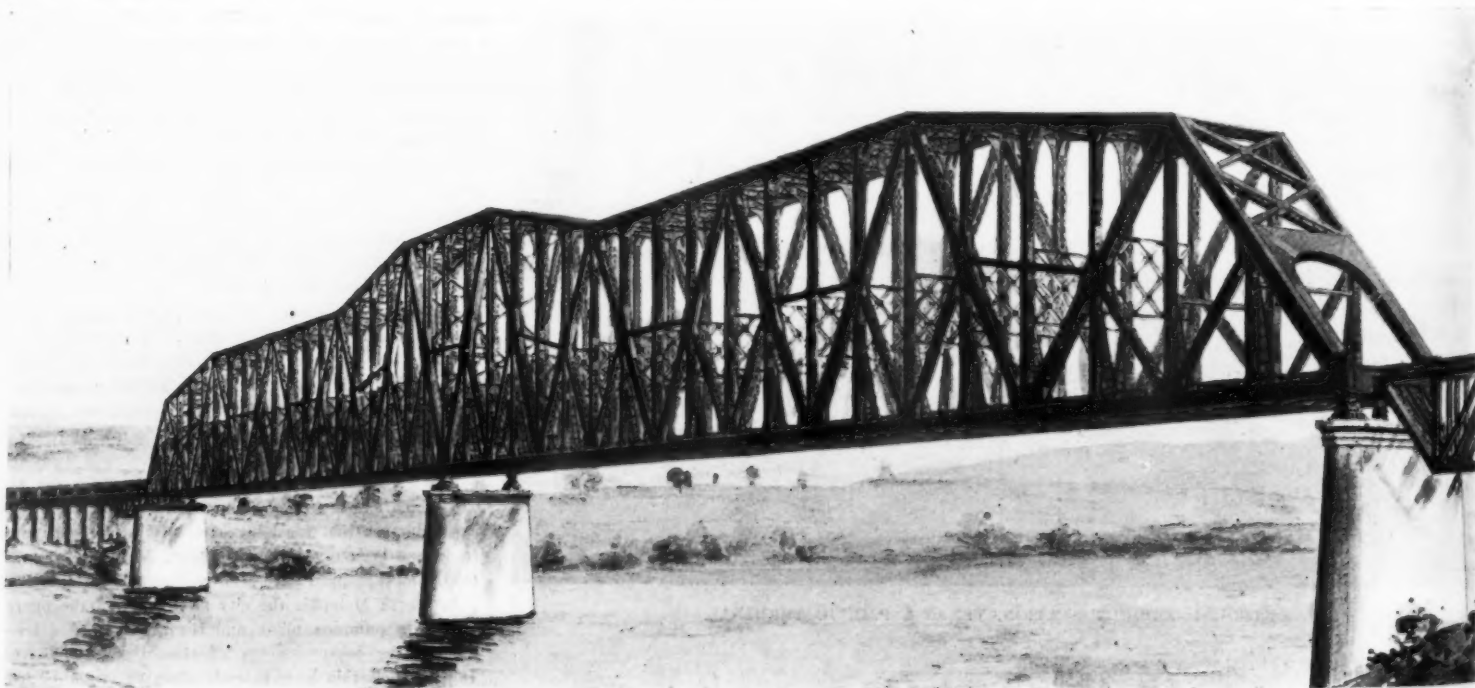
A. C. BOUGHTON.

Chesapeake & Ohio's \$1,000,000 Bridge

FIRST LINK IN CONSTRUCTION OF NEW LINE TO REACH COLUMBUS

The bridge which the Chesapeake & Ohio Railway is building over the Ohio River at Sciotoville, O., will be 3436 feet long, including the approaches, and it will cost about \$1,000,000. The bridge proper is 1550 feet long, and consists of continuous riveted steel trusses supported on concrete piers 775 feet apart. This affords two clear spans of 750 feet each, which are required to avoid interference with traffic on the river, for at low water stage the traffic follows the channel on the Kentucky side, while at high water it shifts to the Ohio side of the stream. It is stated that the trusses are the longest and heaviest of the fully-riveted type ever built in this country, and that there are sev-

On the Kentucky side the viaduct leading to the bridge is 1063 feet long, and that on the Ohio side is 823 feet. The former is on a curve, but the latter is straight. These approach viaducts will be of plate girder spans ranging in length from 67½ to 110 feet, with two deck truss spans of 152½ feet. All will rest upon concrete piers and abutments. The masonry is laid wide enough to add a second track whenever that may become desirable. The spans across the river are sufficiently wide for two tracks now, although only one will be employed at first. The weight of the steel used in construction is approximately 13,500 tons. Some of the gusset plates are the largest of that type



CHESAPEAKE & OHIO RAILWAY'S OHIO RIVER BRIDGE ON NORTHERN EXTENSION.

eral other unusual and distinctive features in the structure. The illustration presented here shows how the bridge will look when completed.

This is the beginning of the Chesapeake & Ohio Northern Railroad, which will connect near Waverly, O., 28 miles northward, with the Norfolk & Western Railway, whose tracks will be used by the Chesapeake & Ohio trains on to Columbus, this trackage arrangement having been made to avoid needless duplication of tracks, the company's original intention having been to build an entirely new line of 93 miles from the river to Columbus. Coal trains will constitute the principal traffic on the new line.

ever used. The span on the Ohio side will be erected first. Work on the pier foundations, etc., is proceeding. All the work will be done without interrupting navigation.

Gustav Lindenthal, 68 William street, New York, is the consulting engineer who designed the bridge, and who is in charge of its construction. The Dravo Contracting Co. of Pittsburgh has the contract for the foundations and masonry, and the McClintic-Marshall Construction Co. of the same city is the contractor for the steel superstructure. Work upon the foundations began in the latter part of 1914, and it is expected that the bridge will be ready for use about November, 1916.

and Watauga have no southern outlet except by county roads, two of which are poor in the extreme, while the third is a turnpike, very heavy in bad weather and with costly tolls. Naturally, the great desire of the people is to get down into North Carolina with their products, as they know the interior of this State and those farther south are their best markets. The result of their poor facilities for getting into the rest of North Carolina is that prices generally in those shut-out counties are only about one-half of those which prevail down-State.

The Carolina & Northwestern Railway has by far the longest trackage of the three roads mentioned, and it passes through good territory. Between Lenoir and Edgemont there are grand valley farms, and farther on

OVER THE BIG BLUE RIDGE.

Three Railroads Pushing Upwards to the Appalachian Mountain Glades.

[Special Correspondence Manufacturers Record.]

Raleigh, N. C., September 14.

Which railroad is going to get across the Blue Ridge, that great mountain wall, and into the Appalachian glades first? Three lines are pointing that way, and the Elkin & Alleghany, the easternmost of them, is the farthest advanced. State convicts, about 150 in number, are working upon it, and the road will come out on top of the mountain, which is much like a tableland, at an elevation of about 3000 feet above sea-level. Northern capital is invested in this line, which is to pass through Sparta, the county-seat of Alleghany county, and then through Jefferson, the county-seat of Ashe county, these two being among the richest counties of the State in cattle raising and dairying. Alleghany also has the high honor of growing the largest average yield of corn per acre in North Carolina.

Next to the westward is the Watauga & Yadkin River Railway, which has now reached the Blue Ridge, while the Elkin & Alleghany is about half-way up. The Watauga road is headed for Boone, the county-seat of Watauga county, and has a 16-mile climb to get there. Like the Elkin & Alleghany, its southern connection is with the Southern Railway, both being on what is known as the Greensboro-Wilkesboro branch.

The third and westernmost of the roads is the Carolina & Northwestern, which extends from Chester, S. C., to Edgemont, in Caldwell county, precisely at the foot of the range. This road as it comes from Chester crosses the Seaboard Air Line at Lincolnton and the Southern Railway at Hickory. It has stopped at Edgemont several years, but surveys have been made for its route across the mountains to get into Watauga county and make a physical connection with the Norfolk & Western Railway, which has built to a point within a dozen miles of Boone.

The residents of the three counties of Alleghany, Ashe

a splendid forest, great areas of which have been recently taken over by the United States as part of the Appalachian Forest Reserve. The writer made a special trip over the upper division of the Carolina & Northwestern with Mr. L. C. Nichols, general manager, making the journey in an automobile on the rails and thus getting the best opportunities for study. For several miles the road runs through the gorge of Wilson's Creek, a splendid stream which comes roaring down from the flanks of Grandfather Mountain, offering many hydro-electric power locations, in addition to great beauty of scenery and opportunities for bass fishing, with trout in the upper waters, good enough to give the sportsman a thrill. In fact, it offers one of the most noble water views in the whole mountain region of North Carolina's wonderland.

Big sawmills were passed, one owned by the Ritter Lumber Co., which during the past dozen years or more has taken out some of the finest timber in the country.

Edgemont is picturesque and ringed with mountains, is electrically lighted and water-supplied, with Wilson's Creek, crystal-clear, at the very doors. One can see that Edgemont is only a halting place. Northward of it, and some 20-odd miles away, is Pineola, the southern terminus of a narrow-gauge road which quite lately was acquired by the East Tennessee & Western North Carolina Railway. A few miles beyond Pineola is Montezuma, which has the honor of being at present the most elevated railway point east of Denver, having an altitude of more than 4000 feet. This connection with Pineola, too, has been thought of in regard to the Carolina & Northwestern.

Now, there is a particularly interesting matter concerning these three roads. This is that somewhat to the eastward of any of them the Norfolk & Western has its line to Winston-Salem, from which point southward to Wadesboro is a road built and owned jointly by the Norfolk & Western and the Atlantic Coast Line, the

latter going to Charleston and other points from Wadesboro, all the route being thus a coal-carrier.

Westward of all three of the railways specially referred to is the Carolina, Clinchfield & Ohio, another big coal handler, with southern connections of great importance. But between these large carriers is a belt of counties infinitely rich and yet untapped by any road leading down into the State, so that any one of the three or all of these three smaller roads has a wonderful field of endeavor and opportunities. It is safe to say the Carolina & Northwestern is going over the Blue Ridge within a reasonably short period, and that the Elkin & Alleghany road will probably be the first to get over the mountain wall, which it will cross at a low gap. The officials of the Watauga & Yadkin River Railway declare that it, too, is going over the mountain. The county of Watauga several years ago voted \$100,000 in bonds for its extension through that region.

FRED. A. OLDS.

Ocean Steamship Company's New Savannah Terminals

\$1,000,000 IMPROVEMENTS COVERING TWENTY ACRES OR FOURTEEN CITY BLOCKS—TO BE READY APRIL 1, 1916.

Construction is now well advanced upon the extensive and costly terminals which the Ocean Steamship

Co. is building at Savannah to provide for the accommodation of its expanding traffic at that port. The



SOUTHBOUND SHED, OCEAN STEAMSHIP CO., AUGUST 19.



NORTHBOUND SHED, OCEAN STEAMSHIP CO., AUGUST 19.

large concrete bulkhead is nearing completion at the outer end of the shed that will accommodate southbound freight, but it is now covered to such an extent with various materials that it cannot be very well distinguished in the picture as a separate structure. The view of the northbound shed shows teams spreading the sand filling behind the bulkheads. In the latter shed may be seen the track platforms where the filling is not yet brought up to grade. The views display the amount of steel frame which had been erected up to a recent date. The office building is almost finished. At the extreme right of the illustration showing the southbound shed is a water tower, although that is not part of the present improvements.

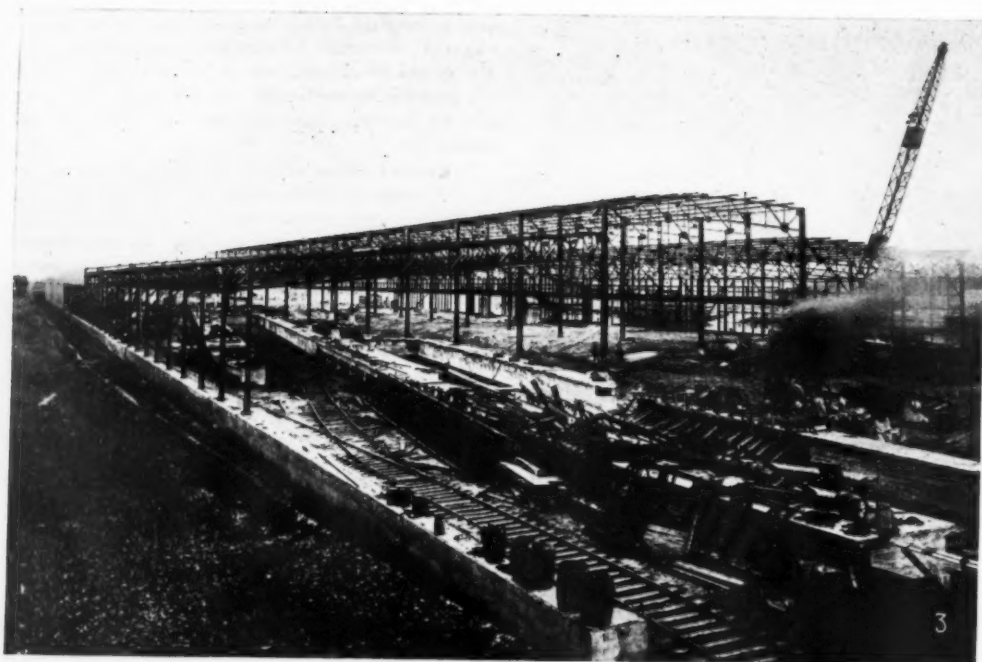
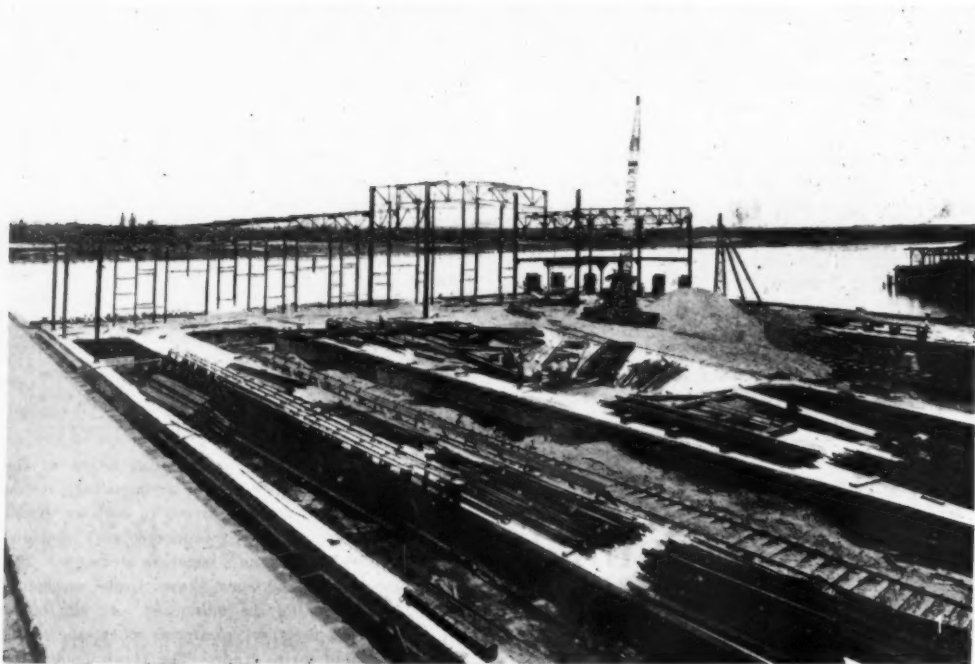
It is expected that the entire new terminal will be completed and ready for use by April 1 of next year. It represents an expenditure of approximately \$1,000,000, and includes the making of a slip 225 feet wide and 1020 feet long, with a 26-foot depth of water at mean low tide. The reinforced concrete bulkhead will extend along the bank of the Savannah River and around three sides of the slip for a total distance of 2500 feet. This will afford berth room for four steamers docking simultaneously. Along the sides and at the shore end of the slip are the steel freight sheds and the office building. These cover an area of 11½ acres, or about 8½ city blocks. The northbound shed will cover 249,733 square feet, the southbound shed 166,898 square feet and the shed at the head of the slip 30,910 square feet, but the total area occupied by the entire terminal improvement is 20 acres, or about 14 Savannah city blocks.

There will be 17 tracks under the freight sheds, with a total length of two miles. Along the platforms can stand 225 freight cars, all of them either loading or discharging at the same time, 100 cars discharging in the northbound shed and 125 cars loading in the southbound shed. There will be five hoists of ten tons capacity each, two in the northbound and three in the southbound shed. They will operate on I-beam trolley tracks, handling freight from the cars to the steamships, or vice-versa. Adjoining and connected with the southbound freight shed will be the city delivery shed for handling wagon freight. It will be 782 feet long and 63 feet wide, and will cover an area of 49,206 square feet.

The office building, of brick and steel construction, is 175 feet long and 52 feet wide. It is two stories high. The waiting-room for passengers is on the second floor, and from it galleries suspended from the roof trusses will lead to the landing stages at the steamship berths and also to a mezzanine gallery at the sea end of the sheds, whence arriving or departing passengers may be greeted by their friends.

It may also be noted that the pilings, foundations, wharves and flooring are of concrete or concrete reinforced. The pier sheds are of standard steel construction, with steel columns, trusses, purlins and bracing. The slip makes a complete U, with the headhouses and office buildings at the land end. All of the structural steel was made at the Roanoke plant of the Virginia Bridge & Iron Co., and was and is being shipped to Savannah and put in position as rapidly as the foundations are cleared and made ready. The Phoenix Construction Co. is the contractor for the bulkhead, piling and foundation work, and J. G. Basinger of New York is the designing and supervising engineer.

PROGRESS PICTURES SHOWING CONSTRUCTION OF SAVANNAH TERMINALS OF OCEAN STEAMSHIP COMPANY.



NO. 1—JUNE 25, 1915.

NO. 2—JULY 29, 1915.

NO. 3—AUGUST 31, 1915.

Heavier Demand at Rising Prices for Lumber.

[Special Dispatch to Manufacturers Record.]

Chicago, Ill., September 14.

Demand and sales of lumber are increasing, and prospects are very favorable for large demand this fall. Prices are advancing under laws of supply and demand.

R. H. DOWNMAN,
(Of New Orleans)

Improved Conditions Reported in the Lumber Trade.

[Special Correspondence Manufacturers Record.]

New Orleans, La., September 11.

Two of the most dependable business barometers in this country are lumber and pig-iron. A revival in demand for one soon reflects its influence on the other. For a long time both business interests have suffered severely, the market for each being in a highly lethargic state. Within the past two to three months pig-iron prices have advanced \$2 to \$2.50 per ton, and now the lumber interests in this and other sections report a very marked improvement in demand for and sales of yellow pine lumber in carload lots, both for local and general interior points. Mills are reported running practically full day shifts, with no attempt to encourage night shifts.

That this policy is wise is very patent, and it will tend to stay overproduction and an undue accumulation of surplus stock. It is cited that recent orders placed by the railroads have had a good influence on the market, as well as the general improvement in building and renewal work of all kinds over the country.

An advance of \$1 a thousand feet over prices of 30 days ago is reported on special cutting and railroad material, with demand strong and advancing prices being paid freely. There has been no improvement in demand for export lumber and timber, due to lack of available transportation facilities.

An interesting table has been compiled by the secretary of the Southern Pine Association here showing the improved demand, based on July statistics, for lumber. It is a matter of record that while the production of yellow pine lumber during the month of July was normal compared with previous months of this year, shipments far exceeded those of any previous month of the year. Shipments for July exceeded the cut practically 9½ per cent., resulting in a reduction of stocks on hand of over 3 per cent. The following table reflects the generally improved condition of the market:

	No. mills.	On hand July 1.	July cut.	Shipments.	Stock on hand Aug. 1.
La.....	53	470,485,913	157,079,544	172,321,765	455,243,682
Tex.....	28	215,449,390	79,394,170	78,782,522	216,061,038
Ark.....	18	210,607,961	47,071,434	53,004,932	204,674,463
Miss....	34	178,987,718	72,786,893	81,126,356	170,648,235
Ala.....	12	60,776,484	20,264,351	24,436,121	56,545,214
Okl.....	8	32,456,894	9,721,105	12,027,385	30,150,613
Fla.....	4	22,903,208	9,401,022	10,504,487	21,799,743
Mo.....	1	12,456,636	1,729,244	2,698,929	11,486,951
Ga.....	0				
Totals...	153	1,204,124,204	397,448,263	434,962,498	1,166,609,989

153 Plants.

July shipments exceeded cut.....37,514,235 Ft.=9.43%
Decrease for month in stocks on hand...37,514,235 Ft.=3.11%

The Southern Pine Association in its last weekly report shows a substantial gain over previous week in orders received, shipments made and unfilled orders on the books, with one mill less reporting. The following report, covering a period of five weeks, reflects improved condition, with better interest shown by members to send in reports and note the improvement going on:

Week ending	Mills reporting.	Accepted orders (cars).	Shipments (cars).	Orders unfilled (cars).
Aug. 7	138	3893	4265	15,066
Aug. 14	144	4817	4548	16,068
Aug. 21	147	4564	3939	16,382
Aug. 28	153	5039	4450	17,218
Sept. 3	154	5180	4808	17,753
Sept. 10	151	5844	4760	18,587

Manufacturers of cypress lumber report no decided improvement in demand for their product, but do say that a much better tone exists and that there is a perceptible improvement, which, from present indications, points toward a substantial and satisfactory business.

Therefore, summing up the situation, the writer wishes to state that after visiting several of the representative lumber interests here he found a much better feeling existing and expressions of belief in a steady increased demand during the coming months.

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Effect of the War On American Industries

AS OFFICIALLY STATED BY THE NATIONAL GOVERNMENT.

[Upon the announcement of the European war last year the Manufacturers Record said that if the countries of Europe had in some altruistic spirit desired to transfer the center of the world's commerce and finance to this country, they could not have taken any other step so well calculated to accomplish this as the war upon which they had entered. The National Government, through the Bureau of Foreign and Domestic Commerce, now expresses a similar view, and in the following article, issued by the Department of Commerce, says:

"Surveying the whole field, it may justly be said that the world's conflict has been of unmeasured value to American industry as a whole."

Some of the ways in which the country is to be benefited as an outcome of this situation are presented by the Department of Commerce in the following story.—Editor Manufacturers Record.]

The blow in the face received by American industries through conditions brought about by the European war has acted as a tonic, has forced the nation to create new branches and enlarge the scope of existing phases of manufacture, opened the way to utilize, on a vast scale, great natural resources of the United States and induced manufacturers and merchants to expand their markets into foreign fields with prospects of permanent results. This is a forecast of the effect of the war on the industrial future of the country.

American ingenuity has been applied with success to the making of articles previously imported, and among those who have shown conspicuous ability in meeting the situation an important place is given to Thomas A. Edison, "America's scientific wizard," who has had a great part in the enterprise and initiative required to build, at a moment's notice, some of the new American manufactures required by the emergency.

A review of the chief industries ministering particularly to the temporary needs of the belligerents across the Atlantic shows that the final outcome will be a very material addition to the manufacturing plant of the United States. Part of this plant will be simply anticipatory of the normal growth of the country's mechanical equipment; part must lie idle in time of peace, but is a distinct asset in the national preparation for an adequate defense against attack; the remainder furnishes at once products needed in the healthy expansion of the chemical industry of the country.

Less conspicuous and spectacular, but of far greater permanent value, is the impulse given to the manufacture on American soil, with American raw materials, of a variety of articles for which we have hitherto been dependent upon foreign skill and enterprise. In a more or less uncomfortable way we have suddenly been brought to recognize the unwisdom, the folly, of shipping vast amounts of the crude material of our farms, forests and mines 3000 miles across the ocean and buying it back in a manufactured form at a vastly enhanced price. We have likewise come to recognize the absurdity of allowing many natural products of the tropics, of South America, of the Far East, to find their way to Europe, and of paying foreign intelligence and skill to transform them into articles of daily need in our lives.

American ingenuity, adaptation, inventive talent, scientific attainments and general enterprise have promptly rallied to meet widespread demands and establish on our own soil the permanent manufacture of a number of wares, some of minor, others of major importance. The return of peace will see them well rooted and able to withstand foreign competition.

The Bureau of Foreign and Domestic Commerce points to the course of events that followed the cutting off by war of the aniline imports from Germany and the supply of potash from the same source, with the resulting tremendous impulse given to the expansion of domestic manufacture. It also calls attention to the fact that, side by side with the increased production of artificial colors has come the realization by dyers of textiles that the possibilities of the natural dyestuffs have been sadly neglected during the past few decades.

The facility and exactness with which the coal-tar colors can be employed, the endless diversity of tints and shades readily secured by their aid, have led the modern generation of dyers to disregard, in great measure, those time-honored vegetable dyes, for centuries the only available source of color, which still give their charm and value to the choice products of Oriental looms. The present "dyestuff famine" has brought them again into

prominence. Not so easily applied as the aniline dyes, they still have their especial merits. As a result the American works engaged in the preparation of extracts from the yellow oak of the Alleghenies, from the logwood of Jamaica, from the redwood of Brazil, from the cutch of India, are providing in enormous amounts the substitutes for the more brilliant, but often more fugitive, hues of the coal-tar products.

In the future natural dyestuffs will occupy a more important position in the textile world, and a more ample recognition will be accorded to the highly perfected processes of recent years, ensuring their fastness upon the animal and vegetable fibers. At the same time, we can look forward with confidence to the evolution of a genuine American coal-tar color industry.

Of the domestic potash supply it is stated that large amounts of the compounds of this element are present in the vast beds of kelp floating on the waves of the Pacific, close to the western littoral of the country; that each year the waters of the Pacific coast are producing a crop in which potash salts, possessing a normal value of more than \$90,000,000, are readily available for use in agriculture and the arts. Now a dozen companies are engaged in the campaign. Not only the inexhaustible supplies in the waters of the Pacific, but also the remarkable deposits in the arid waste about Searles Lake in California and the valuable alunite of Utah are being rapidly transformed into standard commercial grades. A year or two hence we may be able to fertilize our broad acres with American potash exclusively, while another year or two may see us free from dependence upon dyes of foreign make.

The bureau advises the business men of the United States that the present time is opportune for them to study the Latin-American markets, to get in touch with the people of the countries, and thus to open the way for extensive business operations. In other countries also there are unprecedented opportunities for the extension of foreign trade, and with the indications that we are entering upon a period as a creditor nation, we are in a position, as never before, to invest our capital in industries and developments in foreign countries.

It does not believe that the cost of production in the warring countries of Europe will be lowered as a result of the war, or that there will be danger from that source to the holding of new markets already gained. Experience has shown that it is apt to be higher instead of lower after the close of a war, with higher interest rates, higher wages and higher prices in the warring countries. Surveying the whole field, it may justly be said that the world's conflict has been of unmeasured value to American industry as a whole.

To Develop South Carolina Marl.

The Virginia-Carolina Chemical Co., Richmond, Va., will develop marl beds on Ashley River several miles from Charleston, S. C. It is now removing the overburden and constructing a building which will be equipped with machinery for crushing marl for fertilizing purposes. The annual capacity will be 30,000 tons, and it is expected that production will begin by November 1, the equipment having been ordered. This development is the result of the efforts made this year by E. J. Watson, State Commissioner of Agriculture, Columbia, S. C., who has announced that the Ashley River property carries an immense bed of high-grade marl.

REASONS WHY EASTERN CAPITALISTS SHOULD BE ACTIVE IN SOUTHERN DEVELOPMENT.

[Copy.]

MANUFACTURERS RECORD,

Baltimore, Md., September 6.

Messrs. J. P. Morgan & Co.,

23 Wall Street, New York, N. Y.:

Gentlemen—May I take the liberty of bringing to your attention the very great importance from every point of view of an active encouragement on your part of Southern concerns in the handling of war orders or munition supplies for Europe?

Through the activity in the war-order business the iron and steel and kindred interests of the East and the West are being very largely developed, and when the war is over these interests will have been put on a very much higher plane than ever before. Conditions are different in the South, and that section has handled very little war-order business, and, therefore, is getting but little benefit from this development.

It is true that Southern concerns are not as well equipped as those of the North and West for the business, nor are they as a whole financially as strong and in shape to solicit such orders. Nevertheless, I believe that a study of the situation by you from a broad national point of view will impress you with the importance not only for the South, but for the nation, of giving such encouragement as it may be in your power to the development of this work in the South.

The South has suffered severely by reason of the adverse situation in its cotton trade. On the other hand, the West has had a remarkable demand for its wheat and corn and oats. The Eastern and Western industrial centers have felt the influence of the war business, and the Western farmers likewise shared in this activity; but the South has been very greatly handicapped because neither its manufacturers nor its farmers have had the benefit of similar conditions.

The South is the greatest undeveloped asset of the nation. Its development on well-rounded lines and its prosperity in keeping with the prosperity of the whole country are essential to the highest national development and the broadest national spirit. Moreover, the war munition business is so largely centered in a limited area along the Atlantic coast that if this section were ever under any circumstances captured by an enemy the South and the West and the Pacific coast would be almost helpless because of the lack of great enterprises able to turn out war supplies.

It is incumbent, therefore, it seems to me, not only upon the National Government, but upon the great leaders of finance in this country, to recognize this situation and the responsibility which follows it.

I am presenting the matter to you from this light rather than from that narrower view which would suggest that your great interests in the railroads of the South make you and all your associates vitally interested in the largest development of this section. The South has labored under many handicaps. It needs, and I believe merits, the broadest co-operation of the great business and financial leaders of the nation. It seems to me that outside entirely of that personal or selfish interest in this upbuilding, there is a broad national significance in the development of this section. As there could be no well-rounded national life, as expressed in thought by Lincoln, while one section was free and one was slave-holding, so there can be no well-rounded national life in its best aspect so long as one section lags far behind in comparison with the abounding wealth and progress of other sections. I grant you that the South has not always done its own share. Nevertheless, it has done marvelous things when you consider the burdens which it has had to carry.

If it be possible at the present time for your firm and its associates to give direct, active co-operation to the development of the making and supplying of war materials by the South, you will be safeguarding the future of this country, and at the same time adding to the prosperity of a section which just now needs, as it has not needed for many years, the earnest co-operation of the financial forces of the nation.

Very truly yours,

RICHARD H. EDMONDS.

Editor.

News and Views from Our Readers

Suggests That the People Are Responsible for the Politicians.

FRED LARKINS, President the American Lumber & Export Co., Birmingham, Ala.

I have noted your excellent editorial, issue of September 2, in re Foreign Commerce, etc.; also on page 50 an item headed, "A Louisiana View of Sugar." I quite agree with the ideas expressed as to the effect of some of our Democratic legislation. But why not put the blame where it properly belongs, instead of "beating about the bush?" The Democratic party appears to be blamed for the situation, and in a sense it is. But has it not done precisely as it promised it would and on which platform it was placed in power? If so, does not the real blame lie with the people who by their ballots sanctioned such policies and virtually instructed the party to carry out these ideas? Louisiana is "howling" about sugar, and doubtless has been hard hit, and without a corresponding benefit to the general public. But did not that same State roll up a fine majority for Mr. Wilson, the head of the "free-trade party?" It would seem, therefore, that they and many others have got just what they voted for, and if they are not satisfied they had better take their medicine and next time vote some other way. It seems the South will vote for any old principles just so long as they are advocated under the Democratic banner, then raise a mighty howl if they get hit in that tender spot—the pocketbook.

Your paper is distinctly Southern in its circulation and its influence, and as such is no mean power in the South. Why not, then, show the people of this section that if they are to avoid legislation that is distinctly detrimental to their material interests they must cast 50-year-old sentiments aside and place their political affairs on a more sane and sane basis. If the Republican party, which is so unpopular in the South, is not all it should be, why not join the ranks and through the added Southern influence in its ranks make it a better party and a party of the South as well as the North, if the old Democratic party still persists in its ruinous policies?

Personally, I care not whether our Government is carried on under the banner of Democrats or Republicans so long as the party in power is the party of the whole country and has sane and sane policies and for the best interests of the country at large. Our country is the richest in natural resources of any country on the globe, and its industries should be so protected as to bring to us the greatest rewards possible, and we should also so encourage and foster shipping that we can deliver our goods to any point on earth that needs or wants them, and when they want them. We can then well afford an import duty on necessities in order to protect our own farmer, and we can always afford a heavy tax on imported luxuries, and by that means make the rich bear their just share of taxation.

"Boost, and Keep Boosting."

W. W. DICKINSON, President Arkansas Brick & Manufacturing Co., Little Rock, Ark.

With most bountiful crops; with foreign gold flowing to us by the hundreds of millions; with our exports exceeding our imports by more than a billion dollars; with our banks overflowing with money and forcing additional storage-room for more; with unbelievable prosperity predicted by the "money kings," and at peace with all nations, and with an abiding faith that our great and wise President will guide the old "Ship of State" so as to steer clear of all entanglements, and at the same time command the respect and admiration of all governments, why should we worry? And we won't, if we will just turn "Old Confidence" loose.

If all this be true, and we read it daily, then it is nobody's fault but our own if the wheels of commerce do not go 'round. So let's give the old wagon a boost, and keep boosting until it is safely landed on "Mount Prosperity."

Get busy! Everybody up and nobody down.

A Highway from Washington Through Atlanta to Pacific Coast.

JOHN R. GIBBONS, Bauxite, Ark.

"The Lee and Jackson Highway" is proposed and being constructed from Washington through Virginia and south toward Atlanta.

The "Dixie Highway" is being built from the State of Illinois through Kentucky, Tennessee, Georgia and Florida.

These highways are proposed to follow the march of the two great armies that fought in the war between the States.

The "Lincoln Highway" is proposed to run from ocean to ocean, 3400 miles, beginning at New York City. I note in the September American Forestry an article on "Tree Planting Along the Lincoln Highway." This road is proposed to start from New York City through the "Sunrise Entrance," and the State of New York plans planting white oak along this highway "reminiscent of Lincoln's career." With the white oak will be combined Norway maples, hemlock and white birch. The State of Pennsylvania will attempt to accentuate her native vegetation, and in Ohio "the wild-garden effect" will be used, and "variety will be the aim" of Indiana. In fact, each State will endeavor to accentuate its own forestry and plant life along the highway across the whole continent. This is a very beautiful idea and would make a wonderfully attractive route.

The South should not be less patriotic nor enterprising than the North, and should give expression to its devotion and love of country and its heroes by building a highway also from ocean to ocean, starting with one branch of it at the splendid bridge that is to be built across the Potomac River near the upper end of the Mall and near where the monument to Lincoln is being erected in Washington City. This highway should go through Richmond, Va., and to some point south, say Atlanta, Ga., where it would be intersected by the other branch of this great Southern highway coming from Charleston, S. C., and then should extend west, passing through Memphis, Little Rock, Dallas, Ft. Worth, El Paso, Tucson, Yuma, Los Angeles and San Pedro, the ocean port of Los Angeles. This great highway should be known as the "Jefferson Davis Highway."

There should be an organization in each State through which this road passes; in fact, the entire South to assist in its building and beautifying. This highway, when completed, would be a most attractive route, and, in fact, the only one that would be open to travel (the year round, and would have the advantage of the more northern routes in that from the Atlantic to middle Texas a great deal of the route would be lined with great trees of the natural forest still growing.

This road in building from the Potomac River opposite Washington would extend entirely through the States that joined the Confederacy and also the territories of New Mexico and Arizona, claimed by the Confederacy, and the only one State entered by it not friendly to the Confederacy being California.

We deny any intention or desire of disloyalty to our common country; our chief aim to be to inspire our Southern people to keep up with our brethren north of us in public enterprise and love of country.

Able to Run Our Own Government.

ED. L. HUMPHREYS, Vice-President and Manager Southern Saw Works, Atlanta, Ga.

Your editorial "Put None But Americans on Guard" should receive the hearty endorsement of every patriotic American citizen. To use an every-day expression, you have "hit the ball."

When such a staunch, conservative journal as the MANUFACTURERS RECORD strikes out bravely from the shoulder, as indicated in this instance, it is time for the people—the real unadulterated true-blue citizens—to echo the sentiment so well expressed and to urge a recognition of our ability to run our own government according to all of its traditions of honor and fearlessness.

Alluring Opportunities That Mississippi Presents.

J. S. COBB, Dixie Farm, Garden City, Miss.

The resources of Southwest Mississippi are attracting the attention of investors in different enterprises. The half has not been told of the varied products of the soil. It would be worse than folly to misrepresent the facts and cause an influx of investors to be disappointed.

This was once an all-cotton country. With the advent of the boll-weevil cotton was virtually abandoned. The white Spanish peanut was substituted as a money crop, with astounding results. Soil and climatic conditions proved this to be the home of the peanut. The soil here produces a larger and fatter nut than in most other places. When planted on the most suitable lands, we gather from 65 to 75 bushels per acre, and still leaving from \$2 to \$3 worth per acre that are picked up by hogs, which, of course, is not a loss to the farmer. There is also to be added to this 700 pounds of peanut hay per acre. There is a ready market for the peanut and hay at a price that is unequaled by any other crop compared with the cost of producing it. Peanuts are not an expensive crop to grow; in other words, it is one of the cheap crops. We have realized \$75 per acre from peanuts and hay without the use of fertilizer. With intensive farming and the use of fertilizers the yield per acre can easily be increased to 100 bushels.

Southwest Mississippi can claim a variety of soil that is adapted to growing more difficult crops at a profit than any State in the Union. We can and do live cheaper and are as well contented as any people on earth. The mild winters and pleasant summers give active outdoor life the year 'round.

We extend a welcome glad had to all that cast their lot with us. A prospector from Wisconsin asked the question, "Do you treat strangers this way all the time?" My answer was: "If he's a man, we do. Southern hospitality knows no bounds."

The migration from the North and West into Southwest Mississippi increases with each year. The motto here will be "for better houses, mules, cattle, hogs and all kinds of grain and grasses."

Keep your eyes on this part of Dixie.

Things That Are Likely to Happen Again.

CHAS. E. CHIDSEY, Pascagoula, Miss.

One of the greatest dangers of this country today is that the people see no danger. They must be roused from their lethargy, and it can only be done through such journals as the MANUFACTURERS RECORD taking a bold stand.

I have just read with much interest Mr. Henry B. Joy's article "The Nation's Safety Staked on Preparedness," and give it my hearty endorsement, especially his comments upon Mr. Bryan, for "them's my sentiments." Bryan and Bryanism must be crushed, and the sooner we do it the better.

Those who are familiar with the history of Prussian militarism know how it is the creation of the diabolical genius of Bismarck, and that it was created for the purpose of turning back the rising tide of democracy, and how first the States of the German Confederacy, then Denmark, Austria and France, were each in their turn ruthlessly crushed by the machine, and all because they remained listless and allowed it to reach gigantic proportions and made no effort to ward off the blow that threatened them. The events of 1914-15 show us that the machine is more efficacious and powerful than it was in 1870, and give warning that if Germany wins, this country must fight for its existence, and yet we are told to rest supine and wait until the blow falls!

The Greek historian, Thucydides, in speaking of his own history of the Peloponnesian War, says: "It is not written as a prize for the present recital, but as a possession for all time, for those things that have happened once are according to human nature likely to happen again." The story of militarism shows us "what is likely to happen again."

A TALE OF PROSPERITY.

Shipping Coals to Newcastle Beaten by Georgia Shipping Beef and Pork to Chicago.

T. EDWIN MINIHNETTE, Farmers' Land Loan & Title Co., Albany, Ga.

Southwest Georgia meat is today being raised, slaughtered and shipped into Chicago in competition with Western beef and pork, and reliable farmers in this section claim to be raising pork at three cents per pound.

The South is smiling again, and under methods of diversified agriculture has produced this year immense crops of grain.

The unusual interest manifested in this section in cattle raising, grain and leguminous crops forestalls the prediction that before many years Southwest Georgia will be the foremost cattle-raising center of the United States.

Mr. C. A. Horne, a farmer living four miles east of Albany, Ga., produced on one and one-half acres 67.03 bushels of wheat this year. This is 44.69 bushels to the acre. This land was highly cultivated and well fertilized with animal manure. This wheat was ground and the flour sold on the local market and the gross returns were \$111.69 per acre.

Other examples of heavy production per acre are proving to the farmer that it is far better to cultivate small acreage and get a large yield than to plant large areas and harvest a scant crop.

Georgia is prosperous, and conditions are rapidly assuming normal proportions.

We are enclosing a copy of the Albany Herald containing an article in reference to 50 families who will be brought here and located on a tract of land in one colony. This is of great interest to the entire South.

Too much praise cannot be given to the MANUFACTURERS RECORD for the wonderful assistance it has always given the South and the aid it has rendered in helping to develop Southern enterprises and the entire Southern territory.

How a Big Cotton County in Texas Will Help the Farmers.

E. F. DRAKE, Secretary Chamber of Commerce, Waco, Texas.

In replying to your letter of the 24th inst., beg to say that we do not plan the erection of cotton warehouses, but have rented a building which will be operated under the State bonded warehouse law and will furnish free storage to the farmers of McLennan county, charging them 25 cents per bale per month, same to cover insurance and handling.

We have provided for the care of about 4000 bales, but as soon as more is needed same will be provided, as we intend to care for the entire crop of McLennan county.

Interested in Starting a Cheese Factory.

GEORGE M. WILSON, Phoenix Roller Flouring Mills, Easton, Md.

I am very desirous of obtaining information about the manufacture of cheese. This is a fine dairying country, and the farmers have no way of getting rid of their milk.

I would like to know something of the cost of producing cheese and the percentage of milk that can be worked up in the manufactured product, the kinds of machinery required in the business and the probable cost of same. I would appreciate very much if you can put me in touch with the manufacturers of this article.

Certain to Be Benefited Immensely.

H. PAYNE BREAZEAL, President Baton Rouge Chamber of Commerce, Baton Rouge, La.

I wish to thank you for the publication of my letter of August 27. I am sure that the appearance of this letter in your most excellent journal will benefit this locality immensely, and I will be sure to advise you of the direct results from it.

Improved Rivers and Harbors Necessary for Commercial Development.

CHARLES E. CHIDSEY, Pascagoula, Miss.

The editor of the MANUFACTURERS RECORD is once again, and, as usual, right when he takes up the question and favors the improvement of rivers and harbors, for improved navigable rivers and harbors are, if I may so use the term, commerce breeders. The oft-repeated argument that roads, canals, etc., should not be built through a land that was unsettled is an absurd one, and so old that it was irrefutably answered by Adam Smith as far back as 1778. "Good roads, canals," he says, "and navigable rivers, by diminishing the expense of carriage, put the remote parts of the country more nearly upon a level with those in the neighborhood of the town. They are upon that account the greatest of all improvements. They encourage the cultivation of the remote, which must always be the most extensive circle of the country. They are advantageous to the town by breaking down the monopoly of the country in its neighborhood. They are advantageous even to that part of the country. Though they introduce some rival commodities into the old market, they open many new markets to its produce. Monopoly is besides a great enemy to good management, which can never be universally established, but in consequence of that free and universal competition which forces everyone to have recourse to it for the sake of self-defense. It is not more than 50 years ago that some of the counties in the neighborhood of London petitioned the Parliament against the extension of the turnpike roads into the remoter counties. Those remoter counties, they pretended, from the cheapness of labor, would be able to sell their grass and corn cheaper in the London market than themselves, and would thereby reduce their rents and ruin their cultivation. Their rents, however, have risen, and their cultivation has been improved since that time."

"Comparisons are odious," says Dogberry, "but in a campaign of education such as the MANUFACTURERS RECORD is conducting the best answer to the arguments of the opponents of river and harbor improvements is to show by comparison what vast and beneficial results have followed from the improvement of waterways in lands beyond the sea. The MANUFACTURERS RECORD has several times called attention to the immense sums of money that the governments of Europe have been expending in improving their inland waterways, and we need not here repeat the details, for we are concerned only with the results."

The argument is frequently made that the improvement of navigable streams is inimical to railroads. We are not able to make such a deduction from the data at our hands, but rather to conclude, as Adam Smith taught, that the extension and improvement of natural and artificial channels of commerce opens up the interior and increases the demand of the cities for the products of the country, while at the same time it augments the demands of the country for the manufactures of the cities, and also brings them into a closer social and political intercourse that cannot but be advantageous to both of them.

Much of the ill-advised hostility to river improvements comes disguised under the favorable aspect of public economy. Economy is a virtue, but parsimony is a vice. Extravagance and waste in public expenditures should be avoided, "and, as we always commend the middle as being between two extremes," says Aristotle, "one should be careful lest a desire for the appearance of economy should defeat measures that would be of the greatest public utility." The economy that would have vast areas of the earth remain "deserts idle" in order that the money which their development would require might remain in the treasury that it may make a "showing" at election time is a most pernicious form of waste, and we might add, "demagoguery."

The writer can well remember that where now stands the city of Gulfport there was, before the building of the G. & S. I. R. R., only a stretch of marshy sea beach, without a single habitation. There was no harbor there, and the back country was only a barren pine wilderness. Capt. J. T. Jones built the G. & S. I. R. R., and, with the aid of the National Government, a deep-water harbor. From 1890 to 1900 the population of Harrison county, of which Gulfport is the county-seat, increased 68.3 per cent., and from 1900 to 1910 it increased 65 per cent., and the property of the county

subject to an ad valorem tax was \$2,576,824 in 1890, and in 1902 it was \$6,533,488. It is much larger now, but the writer has not the exact data at hand. Had Capt. J. T. Jones and the National Congress taken the view that commerce and industry should be first developed at Gulfport before the railroad and harbor should be built, it is safe to say that the site of the city would be today what it once was, a strip of barren sea sand and salt marsh.

North Carolina Shows the Right Spirit.

BESSIE HILL HACKNEY, Secretary the Chamber of Commerce, Raleigh, N. C.

North Carolina is making very rapid strides and through the North Carolina Bureau of Publicity and State Commercial Secretaries' organizations during the next year we are going to educate the people to our opportunities and advantages.

We are launching a State Home-Coming for October, which we expect to make an annual event. Much publicity through newspapers, industrial magazines, other periodicals, railroads, fairs and organizations will be given, which we believe will result in great good to our great State.

Saw Palmetto and Berries of Florida.

U. F. BUEKKE, The Vendome, Newport, Ky.

In your issue of September 2 you print a letter on Palmetto berries from Apalachicola, Fla., in which the writer discusses the value of Saw Palmetto and berries.

I am not familiar with the amount of berries they produce, but will say that he should go down the Gulf Coast some 100 miles or so and he will see that it is the one aim of the people to rid themselves of the "Saw Palmetto Pest," which is what makes truck land in the raw state cost \$100 per acre to clear.

The South Overlooked.

F. M. RUNNELS, Reidsville Commercial and Agricultural Association, Reidsville, N. C.

I see in the morning papers that the membership of the Naval Advisory Board is distributed as follows, by States: New York, 8; Maryland, 1; Michigan, 1; Connecticut, 2; New Jersey, 4; Pennsylvania, 2; District of Columbia, 1; Massachusetts, 1; unplaced, 2.

Is it possible the South could furnish no man equipped for the board?

He Struck the Right Medium.

SOUTHERN MANUFACTURING Co., Manufacturers of Agricultural Implements, Columbus, Miss.

Yours relative to continuing ad. on page 79 in issue of September 2 received. The results of this one ad. are sufficient, and very satisfactory. We have received enough quotations with samples to cover a fair-sized henhouse. We will be in line with you again. The writer has known of previous results in other lines of business.

Has the Same Opinion Regarding Germany.

TOM RICHARDSON, Managing Secretary South & East Texas Development League, Houston, Tex.

There has been a great improvement in the MANUFACTURERS RECORD, and this is particularly true as to the editorial pages. I agree with the MANUFACTURERS RECORD's stand relative to Germany.

Defiance Sock Mills.

The Defiance Sock Mills, Charlotte, N. C., recently mentioned, will operate 30 knitters, 6 ribbers, 5 loopers, press dryers for finishing, electric power, with steam for heating and finishing, etc. This company has let contract to R. L. Goode of Charlotte for the erection of its two-story standard mill construction 80x40-foot building, in which the machinery will be installed. Weekly capacity will be 900 dozen pairs of split-foot hose.

Pan-American Road Builders Hold an Important Meeting

JOINT SESSION OF AMERICAN HIGHWAY ASSOCIATION AND AMERICAN ROAD BUILDERS' ASSOCIATION AT OAKLAND, CAL.

The most important good-roads meeting of the year, the Pan-American Road Congress, was held this week in Oakland, Cal., under the joint auspices of the American Highway Association and the American Road Builders' Association, the two foremost national road organizations of the country.

Heretofore these associations held separate meetings, but it was felt that the Panama-Pacific International Exposition afforded an opportunity for bringing together in one great convention those from all parts of the United States, Canada, Central and South America who were interested in the question of modern road and street improvement.

In arranging the meetings the officials of the congress received the co-operation of the Tri-State Good Roads Association, the membership of which covers the States of California, Oregon and Washington, and also which arranged its annual convention to conform with the same dates of the congress.

This important meeting was attended by many of the men widely recognized throughout the country as authorities upon the administration, construction, repair and maintenance of roads and streets, and quite a number of them read especially prepared papers covering important phases of road and street building.

In order to reap the fullest benefit from the subjects handled by the various papers, these were followed by discussions participated in by the attending delegates, thus giving an opportunity for the fullest possible consideration covering different phases of highway improvement.

The congress was formally opened on Monday, September 13, when formal addresses were delivered by several governors and the heads of the two leading road organizations. In the afternoon session papers were read by leading authorities on subjects covering the fundamental importance of modern highways.

The remaining sessions of the congress were devoted to the discussion of subjects directly bearing upon the construction, maintenance and administration of highway work. At each session only three topics were offered, thus allowing sufficient time for an ample discussion of the matters presented.

The officials of the Panama-Pacific Exposition set aside September 15 as Pan-American Road Congress

day, and the afternoon session of the congress on that day was held in Festival Hall in the Exposition grounds and an official tour was made to the various road-machinery and material exhibits at the Exposition, including the road exhibits of the various governments and States.

The program provided for addresses on the opening day by Hon. Charles W. Gates, Governor of Vermont; Hon. Hiram W. Johnson, Governor of California; Hon. Ernest Lister, Governor of Washington; Hon. James Withycombe, Governor of Oregon; Hon. John L. Davie, Mayor of Oakland; Hon. James A. Barr, Director of Congresses, Panama-Pacific International Exposition; G. W. Tillson, President, American Road Builders' Association, and Fairfax Harrison, President, American Highway Association.

At the regular sessions of the congress the following papers were provided:

"The History and Future of Highway Improvement," by L. W. Page, Director, Office of Public Roads, United States Department of Agriculture.

"The Relation of the Road to Rail and Water Transportation," by C. J. Tilden, Professor of Civil Engineering, Johns Hopkins University.

"The Benefits and Burdens of Better Roads," by S. E. Bradt, Secretary, State Highway Commission, Illinois.

"Roadside Improvement," by Henry S. Graves, Chief, Bureau of Forestry, United States Department of Agriculture.

"The Essentials of Proper Laws for Highway Work," by Col. E. A. Stevens, State Commissioner of Public Roads, New Jersey, and A. N. Johnson, Highway Engineer, Bureau of Municipal Research, New York City.

"National, State and Local Responsibility for Road Conditions and Ways of Securing Improvements," by Judge J. T. Ronald, Seattle, Wash.; O. E. Hotle, Oakland, Cal., and Hon. Arthur Langath, Portland, Oregon.

"Proper Road Location: Its Importance and Effects," by Wm. R. Roy, State Highway Commissioner, Washington.

"Road Drainage and Foundation," by Geo. W. Cooley, State Engineer and Secretary State Highway Commission, Minnesota.

"Highway Bridges and Structures," by W. S. Gearheart, State Engineer, Kansas.

"Highway Indebtedness: Its Limitation and Regulation," by Nelson P. Lewis, Chief Engineer, Board of Estimate and Apportionment, New York City.

"Organization and System in Highway Work," by A. B. Fletcher, State Highway Engineer, Cal.

"The Educational Field for Highway Departments," by Prof. L. S. Smith, Department of Highway Engineering, University of Wisconsin.

"Roadway Surfacing," by F. F. Rogers, State Highway Commissioner, Michigan.

"Resurfacing Old Roads," by W. D. Uhler, Chief Engineer, State Highway Department, Pennsylvania.

"Street Pavements," by Curtis Hill, City Engineer, Kansas City, Mo.

"System in Highway Accounting," by S. D. Gilbert, Auditor, State Highway Department, Wisconsin.

"Uniformity for Highway Statistics and Data," by H. E. Breed, First Deputy, State Highway Commission, New York.

"Engineering Supervision for Highway Work," by T. H. MacDonald, State Highway Commissioner, Iowa.

"The Merit System in Highway Work," by Richard Henry Dana, President United States Civil Service Reform League.

"The Determination of the Justifiable Outlay for Specific Cases of Highway Improvement," by Clifford Richardson, New York City.

"Convict Labor for Highway Work," by G. P. Coleman, State Highway Commissioner, Virginia.

"Motor Traffic: Its Development, Trend and Effects," by Elmer Thompson, Secretary, Automobile Club of America.

"Equipment for Highway Work," by A. H. Blanchard, Professor of Highway Engineering, Columbia University.

"Load and Tire Effect and Regulation," by F. H. Joyner, Road Commissioner, Los Angeles County, Cal.

"Comparisons of Traffic and Their Economic Value," by Linn White, Chief Engineer, South Park Commissioners, Chicago.

"Maintenance, Materials and Methods," by A. W. Dean, Chief Engineer, State Highway Commission, Massachusetts.

"Dust Suppression and Street Cleaning," by W. H. Connell, Chief, Bureau of Highways and Street Cleaning, Philadelphia, Pa.

The various details of handling this successful congress were in charge of the following executive committee, representing the American Highway Association and the American Road Builders' Association: Chairman, Governor Chas. W. Gates, Franklin, Vt.; W. W. Crosby, Baltimore, Md.; Jas. H. MacDonald, New Haven, Conn.; J. E. Pennybacker, Washington, D. C. and E. L. Powers, New York, N. Y.

The History and Future of Highway Improvement*

By LOGAN WALLER PAGE, Director, U. S. Office Public Roads.

From the standpoint of construction, the history of highway improvement back of 1775, when Tresaguet, the famous French engineer, made known his method, has little more than a sentimental interest. To duplicate the massive Roman highways today would involve the use of an incredible amount of labor and material, the most of which would be wholly unnecessary. I should estimate that a Roman highway, such as the Appian Way, would cost today approximately \$500,000 per mile. In this age of conservation of energy and materials, the massive ancient highways have no place.

Tresaguet while Inspector-General of the District of Limoges presented a report to the Assembly of Roads and Bridges of Paris in 1775 in which he laid down the essentials of good highways as, first, adequate drainage; second, the reduction of the foundation to a single course of stone laid on edge on a subgrade crowned parallel to the finished surface; third, a single course of broken stone to cover the foundation to a thickness of about six inches, and fourth, a system of continuous maintenance by regular employees. Out of the labors

of Tresaguet grew the splendid road system of France, with its great organization of cantonniers for continuous systematic maintenance. About 25 years later Telford, in England, announced a method of construction almost identical with that of Tresaguet, and about the same time Macadam introduced his method, which varied from that of Tresaguet by discarding the pitched foundation and using on the earth subgrade a single course of hand-broken stone. The methods followed by these three men continued without fundamental changes until practically the beginning of the twentieth century. The invention of the stone crusher by Blake in 1858 resulted in the very general abolition of hand labor for crushing stone, while the invention of the steam roller by Lemoine in 1859 marked another step toward the perfection of equipment and increase in efficiency of construction work. The Macadam method has been modified to the extent that the stone is now usually applied in courses and stone screenings are used as a binder. The advent of the automobile has, as you well know, served to revolutionize methods of construction and maintenance, and has given a new functional importance to the highway which has practically made

it necessary for us to start into the twentieth century on a new basis.

From an administrative standpoint, the experience of European countries is valuable to us chiefly through its demonstration of the efficiency of a centralized and systematic supervision as compared with uncorrelated local supervision or with the management of the roads by private enterprise in the form of toll companies. The French system of highways affords us an example of efficient centralized management which cannot fail to prove of value in working out our own systems of management. Washington recommended in a letter to Patrick Henry that the roads of Virginia be taken away from the control of the county courts and be given to the State authorities. One of Hamilton's pet schemes was that of road improvement, and he recognized thoroughly that roads left to local authority would never be satisfactorily built. In a functional sense, the national roads of France were laid out before the advent of the railroad, and were designed to serve the purpose which, in later times, was served in that and other countries by the railroads. In other words, it has yet to be demonstrated that the highway may be considered in the class of the railroad as main trunk lines of traffic. Possibly if the French national highways had been laid out at the opening of the twentieth century instead of the nineteenth, a different plan might have resulted. The French methods of construction prior to the general introduction of the automobile were the methods of Macadam and Tresaguet, so that France is having the same problem of adapting the roads to meet the

*Paper read at the Pan-American Road Congress, Oakland, Cal., September 13-17, 1915.

new traffic conditions that confront us in this country, except that her difficulties are greater by reason of the large mileage of roads built according to the old methods. The French system of management and maintenance, however, has resulted through a long period of years in keeping the French roads in first-class condition, and at less cost per mile than in England, where the policy of extreme localization in road management has largely prevailed. Maintenance costs have increased so enormously in recent years that figures promulgated a few years back are of little value, but I should estimate that the general cost of maintenance in England has been at least 20 per cent. higher than the cost of maintenance in France, this difference being due largely to the difference in management.

Another lesson of importance in the history of highways abroad was the experience of England with the toll roads. During the first half of the nineteenth century the toll roads formed a perfect network throughout England, Scotland and Ireland, but they proved so costly in operation and so inefficient in results as to cause the most widespread dissatisfaction and opposition. By 1878 legislation had been passed providing for the final abolition of every toll road in England, Scotland and Ireland.

Our own history of road management has been, for the most part, a repetition and an exaggeration of the poor local management which came to us as English precedent. The best evidence we have as to the inefficiency of extreme localization in road management is the fact that the only States which are really noted for their excellent highways are those in which the State government has provided a system of State highways. No doubt mistakes have been made in State work, with considerable waste of State money, through the influence of politics and faulty organization, but the fact remains that during the past 12 or 15 years in which State aid has been a prominent factor, the States of Massachusetts, Connecticut, New York, New Jersey, Maryland, Michigan, Wisconsin, Virginia, California, Washington and others have made greater progress than was made throughout their entire history prior to the adoption of the policy of State participation. We are spending at the present time upwards of a quarter of a billion dollars a year, and it is absolutely imperative that centralized and systematic control be provided if we are to avoid saddling posterity with a heavy debt for improvements which do not materialize.

The rapid development of the automobile and the concentration of approximately half our population in crowded cities are two factors which have made the problem of highway construction and maintenance difficult, intricate and of nation-wide importance. In the early days, when each farm or plantation was a community unto itself, the highway was a purely local convenience. Even in comparatively modern times, when large cities were few and far between, and when animal power limited the radius of traffic to 30 or 40 miles at the most for a day's journey, the roads were still of local importance primarily, although in a larger sense than in the colonial days.

The automobile has tremendously increased the radius of travel. It has linked city and country together; it has made township and county, and even State lines, sentimental boundaries which have lost their economic importance. The crowding of millions of our people in cities has made the public highway in the most remote rural districts of vital importance to the cities, because the farmers must feed the cities. Parallel with this need of the city for the product of the country has come the need of the country dweller for the manufactured products of the city, and so there has been woven by the shuttle of mutual need in this wonderful age of invention and progress a network of interdependence in which the public highway has become an essential part of the very fabric of our social and industrial life.

Inseparably linked with these great functional problems of the public highways are the physical problems which motor traffic and the movement of a vast tonnage of products to and from the centers of population have given rise. The growth of the motor vehicle industry has been not merely rapid; it has been stupendous. It seems but yesterday since the awkward one-cylinder cars drove frightened horses into the ditches, and yet today it is probably not overestimating to say that there are over 2,250,000 automobiles in the United States. This phenomenal traffic came suddenly upon thousands of miles of water-bound macadam and

gravel roads which had been built to meet the older forms of traffic. The systems of maintenance in effect were inadequate, and utterly broke down under this new burden. The result was that by the time Legislatures awoke to the necessity of providing adequate money and organization, their roads had deteriorated to such an extent that in many cases resurfacing was necessary. Maintenance costs increased at an alarming rate. Where formerly \$100 per mile was considered sufficient for a water-bound macadam road, it quickly jumped to \$250, then to \$350, to \$500 and \$750, and in some States it has been estimated that \$1000 per mile per annum is necessary for maintenance. As a result of these startling charges for maintenance, a considerable degree of discouragement has arisen, for the taxpayer does not like to feel that he must not only spend a large sum of money for construction, but must thereafter put up from \$500 to \$1000 a mile to keep his road in good condition. Right here let me emphasize the fact that these excessive costs are not strictly maintenance costs, but rather repair and reconstruction costs, as well as extraordinary maintenance due to tardiness in meeting the heavy traffic wear. Gradually we are adapting ourselves to the new conditions, and the result should be a considerable reduction in the cost of maintenance per mile. As an incident to the modern problem, brick, concrete and improved bituminous surfaces have come into prominence. I will not undertake to enter into the discussion of the relative merits of each type of highways, but it must be generally recognized that we can no longer follow the shortsighted policy of building highways without consideration of the problem of maintenance. It is not so much what a highway costs today as what it will cost in the aggregate in 10 years, or 20 years.

The basis proposition upon which our road building and maintenance in this country must ultimately rest is that the character of the road and the amount of money expended for its construction and maintenance must be determined by the service which the road renders. For example, it may be genuine economy to spend \$20,000 on one road and only \$2000 on another road, because in the former case the service rendered may be ten times the service rendered in the latter case. We have in this country some two and one-quarter million miles of road. We know that in every community, in every county and in every State all traffic flows from feeders and little neighborhood roads into the main highways that lead to the markets and shipping points and connect the centers of population. It is a conservative estimate to say that these highways do not aggregate one-quarter of the total mileage. A great many million dollars of highway expenditures have been unproductive in this country through undue parsimony in the improvement of the main heavily-traveled highways and lavish extravagance in the improvement of highways which have little or no economic importance.

The taxpayer should awaken to the full realization of the fact that the taxes which they pay into the public treasuries for public road improvement should, in the interest of the taxpayers, be subjected to the same sort of business management and business expediency that make for success in private enterprise. The average taxpayer pays his taxes and thereby relieves himself of what he considers a burden. He loses all interest in the further disposition of his tax money, except to complain from year to year of the small return which he has received for his outlay. Legislatures are supposed to be the servants of the people, and if the people who pay taxes insist that their Legislature provide for the management of the county's public works an adequate and responsible organization and an intelligent system for the expenditure of road funds, the proper laws would be forthcoming and the wastefulness and inefficiency which has marked our previous experience in highway improvement would be largely corrected. Before undertaking any general scheme of improvement it is the duty of the county to have traffic studies made of its roads, so as to determine the order and measure of their importance and the character of construction which should be adopted to meet the traffic requirements as indicated by such study. The tonnage and the average haul on each road afford a unit of measurement known as the ton-mile, and the total ton-mileage, present and prospective, of the road will indicate its relative importance for modern purposes. This can well be done by ascertaining for each road the land area and the acreage yield of the zone from which it would draw its tonnage of freight traffic. When the

relative importance of the road for the transportation of the farm products to the shipping point is known, the character and amount of the outgoing traffic on the road from the centers of population should be determined. The incoming and outgoing traffic will thus measure the market importance of the respective highways. If the road is of importance for pleasure travel, or is a link in an important through highway, a heavy expenditure for improvement may be justified, aside from a local economic consideration, but certainly some such intelligent method would be infinitely preferable to the present method of laying out a system of roads that will reach all sections from a geographic standpoint and will provide a uniform construction, regardless of the relative traffic importance of the roads to be improved.

Aside from this intelligent selection of locations and types, I believe that there is a positive need for a centralized control and a highly skilled supervision on the part of an agency of the State, particularly with reference to the design and inspection of highway bridges, the expenditure of large local bond issues, the handling of local funds for highway work as to systems of accounting and cost keeping, and finally as to the qualifications of the men locally selected to carry on road work. The trend for the past ten years has been distinctly in these directions, and I believe that ultimately we shall have a compact and efficient county organization and compulsory selection and improvement of roads according to their traffic importance, and finally correlation and executive and technical skill through the medium of a State supervision such as I have just outlined.

In the financing of road improvement there is a growing tendency to rush hastily into debt through the issuance of long-term bonds for the building of roads for which no adequate maintenance provision is made. These conditions are peculiar to county work rather than State work. The evils of long-term bonds for short-term utilities have been dealt with by many authorities on the subject, and I will only reiterate my belief that the solution of this problem will come through the placing of adequate power to supervise and regulate county bond issues in the hands of a centralized State highway department.

On the whole great progress has been made in recent years from the construction standpoint, lesser progress in providing adequate maintenance, while the trend toward centralizing control of the more important features of highway work is just now becoming noticeable in an encouraging degree.

CONVICTS ON HIGHWAY CONSTRUCTION.*

By G. P. COLEMAN, State Highway Commissioner of Virginia.

The Virginia Legislature of 1906, realizing that some definite action must be taken by it for the upbuilding and improvement of the public highways of the State, passed what is known as the Withers-Lassiter law and created the present State convict road force. Under this law the road authorities of a county desiring to improve their roads make application to the State Highway Commissioner for a camp of prisoners. The Commissioner makes requisition to the superintendent of the penitentiary for the number of men he thinks it advisable to employ on the particular piece of construction. These camps vary in size from 35 to 85 men. A sergeant with from three to five guards is sent out with each camp. These sergeants and guards are selected from a list furnished the superintendent of the penitentiary by the Highway Commissioner, and must be discharged on his written request. The sergeant receives from \$600 to \$900 per annum and board, and the guards from \$300 to \$420 and board per annum.

The road work proper is in charge of an engineer or superintendent appointed by the Highway Commissioner, who receives from \$900 to \$1500 per annum. We have found that in many of our camps we can combine the duties of sergeant and superintendent in one man, saving something in salary and a great deal in conflict of authority, since we have found it very difficult to accurately define the line between the two.

The prisoners are trained in all classes of road work.

*Extracts from paper read before Pan-American Road Congress, Oakland, Cal., September 13-17, 1915.

Trusties are made into rollermen, firemen, blacksmiths, carpenters, drill runners, concrete men, etc., the trustees being selected by the sergeant from the better class of prisoners.

The State Road Convict Force is composed of all male convicts who are considered safe by the superintendent of the penitentiary and all male jail men over 16 years of age, and this force, when placed on a county road or in a county quarry, is clothed, fed, guarded and transported by the State and placed on the road each morning free of all cost or expense to the county. Prisoners working on the Road Force shall have for good behavior a reduction of four days per month from the time for which they were sentenced. The last Legislature appropriated \$200,000 and the jail fees for that purpose. The men cost a little less than 53 cents per 10-hour working day, which is divided about as follows:

Provisions.	\$0.21
Clothing.05
Salaries.19
Mileage.007
All other expenses.07

The county road authorities agree on their part that the work shall be done according to the plans and specifications of the State Highway Commissioner, and under an engineer appointed by him, and further, that they will furnish all teams, tools, materials, etc., and all necessary free labor to carry on the work systematically and economically. This about equally divides the cost of the road work between the county and the State.

After nine years of experience, I believe that the solution of the prison question, certainly in Virginia, is to use the men in the construction and maintenance of our roads. In road work there is little or no competition with free labor. The work and the healthy outdoor life tends to build up a man physically, and when you do that you improve him morally; you train him as an expert in handling many pieces of road machinery, and therefore place him in a position to earn an honest living after his confinement. The work on which he is engaged is one of pressing need to the public, and creates in the worker a kind of pride in his own usefulness.

I regret that I am not familiar with the convict road laws of the various States, but from such as I have seen, and using those of Virginia as a basis, I believe that an organization along the following general lines will meet the condition which we have to confront, both from the standpoint of an economist and a penalologist.

There is nothing new in the following plan, the adoption of which I have for years, first as Assistant Commissioner and later as Commissioner urged upon the Governor and the Legislature. I would divide the prison population into four classes, and as a matter of convenience we will take these classes in reverse order:

Class IV.—Long term and dangerous men.

Class III.—Short term convicts and jail men.

Class II.—Trusties, both convicts and jail prisoners.

Class I.—Paroled men.

Class IV shall include all murderers, prisoners sentenced to the penitentiary for second or third offenses, men with records known to have been bad prior to their sentence. These men to be dressed in stripes, for, although, I own, I should prefer some other distinguishing mark, with less tendency to humiliate and degrade them, I realize that prisoners of this class must wear some badge of their condition and worked under guard in stockades in State stone quarries. These quarries to be located advantageously—that is, with a view to the section they are to serve, and on some railroad or railroads serving that section. This material to be supplied to the counties for road purposes at the actual cost of producing the same. To secure an economical distribution of this material it would be necessary to obtain very low transportation rates from the railroads. In the State of Virginia we have always found the railroads ready and willing to co-operate with and assist the department in its work, realizing that the highways of the State are the feeders of the railroads, and that the development of the two go hand in hand.

Class III shall be composed of first-term convicts and prisoners from the city and county jails, and such men from Class IV as by experience you have found that you could trust, even in a small degree. These

men should have some distinctive dress, and I would suggest blue or brown. The men from this class to be distributed throughout the State to the various State road camps, and to be worked under guard in the construction of the county or district roads, a small per diem to be paid them by the county, one-half of which shall be paid them from month to month and the remainder to be paid them on the completion of their sentence. This would insure their having a small amount of money when they are given their liberty.

Class II. To be made up of trustees, or, as they are called in some States, honor men, to be taken from Class III as they develop into men to be trusted. These men to wear ordinary kahki suits, and to be worked without guards, either in camps composed entirely of trustees, or to be distributed to the other State road camps, to be used as drivers, cooks, yard men, enginemen, rollermen, in small gangs to spread stone or shape road, in building concrete bridges, culverts and headwalls. These men to be paid by the counties in which they are working, but rather more than Class III, and to be graded in their pay according to the class of work which they are doing.

Class I. These men to be taken from Class II and to be paroled for good behavior and good work on the recommendation of the State Highway Commissioner and the Superintendent of the Penitentiary. They will wear ordinary clothing, and are to be paroled to the Maintenance Department of the State Highway Commission, and assigned to it by the various counties of the State to be used as patrolmen or in gangs on the maintenance of the roads which have been constructed under the State's supervision. They are to be furnished with proper quarters and to be paid a monthly salary by the county in which they are working, the amount of this wage to be agreed on between the State Highway Department and the county officials. Paroled men under this system would be made a regular part of the State and county free labor road force, the only difference being that the men shall be required to report monthly to some general head and to be governed by the parole laws of the State.

The prisoners are now being trained in the construction of roads, and it therefore follows that they could use the knowledge thus obtained in the maintenance of these roads after their construction. The State would, in this way, reap a double benefit for the service of these men, giving them honorable employment on the completion of their prison terms, and in addition getting the benefit of the training which they have received during their confinement. Along this line there are a number of instances where the men, on the completion of their sentences, have been employed by the contractors as free laborers; also by the farmers who live near the work on which they have been engaged, and by the road force of the county, thus keeping them away from their former haunts.

The success or failure of your convict labor road work will depend on the man in charge. But, given a man of firmness, one with strength of character enough to keep his department out of politics, and I believe you have solved two very important questions—the betterment of your criminal classes and the improvement of your roads.

BENEFITS AND BURDENS OF BETTER ROADS.*

By S. E. BRADT, Secretary State Highway Department.

Without doubt the great majority of the people are in favor of better roads; the disagreement comes when they consider the degree of betterment, which is the determining factor in the amount of the burden it will impose upon the community. It is my purpose in this paper to show that if we have the correct type of road construction and if the cost is properly distributed, the burden will rest lightly upon all and will be small in comparison to the benefits.

Road improvement is fundamentally an economic problem and affects, either directly or indirectly, our entire citizenship, regardless of whether they live in the country, the town or the crowded city; regardless of whether they drive a pleasure car, a lumber wagon or walk the streets of the tenement district. The greatest direct benefits will come to the users of the road, but

in each instance there are indirect benefits reaching a greater number of people, and hence of greater importance finally than the direct benefits.

For our purpose we will classify the users of the road as follows: The farmer, the lumberman or the mine owner, the business man and the tourist.

Let us look at some of the benefits to these four classes in more detail and also note some of their indirect influences.

The entire surplus production of the farm and many of the products of the forest and mine must first be hauled over our country roads to the shipping point. The Office of Public Roads estimates the cost of this hauling at not less than \$500,000,000 annually. It further estimated that improved roads would reduce this cost one-half, which would result in a saving of \$250,000,000 annually.

While this gain of \$250,000,000 would be a direct benefit to the farmer, the lumberman and the mine owners, it would be an indirect gain to the entire people. The carrying of these products to the shipping point is as much a factor in distribution as is carrying it from the shipping point to the consumer. The people are quick to recognize that any increase in freight rates means an increase in the price of commodities, but have failed to realize that the cost of hauling to the railway station is equally a factor in their cost and hence in the cost of living. Freight rates have been reduced since 1837 nearly 90 per cent., but during that time there has been practically no reduction in the cost of highway transportation. The reason for this is that railroads have been constructed and operated from the standpoint of paying interest and dividends, which has forced systematic and economic management, whereas our highways, because of our failure to appreciate their economic importance, have been neglected and the limited amount of work expended upon them has been unsystematic, uneconomic and without satisfactory returns.

The inaccessibility of the country school for several months of the year, due to impassable roads, is one of the great drawbacks to country life. Another drawback is the small school district, supported by a few farmers and with a small number of children and a small assessed valuation from which to collect taxes for its support. This results in a low-salaried teacher, conducting a poor school, with poorer surroundings.

The solution of this problem lies in the consolidated rural school, specializing in the agricultural branches, which will give the pupils an insight into the problems of the farm and inspire them with the wonderful opportunity for the improvement of farm life, financially, socially and mentally. Better roads will mean more consolidated schools and larger units of consolidation, which will give more funds and greater school facilities, or will mean access to the city schools without leaving the farm.

The saving of time to the business man is often the difference between success and failure. In this saving of time the automobile is one of his most useful agents, and the better the road the greater is its usefulness to him.

The benefit of road improvement to the tourist as a user of the road is self-evident, and to attract and hold the tourist we must have good roads. We have the expanse of territory, the scenic effects and the historic spots. We lack only the improved roads to make this country the mecca for the tourists of the world.

The indirect benefit of this traffic to the United States is the expenditure of millions of dollars at home rather than in foreign countries.

The question now arises, are the benefits worth the cost? Fortunately, the answer to this question has not been left to us. The American people have already answered it in the affirmative. The people as a whole stand for progress, and without doubt road improvement is to be one of the greatest factors in national progress.

We have in the United States approximately 2,200,000 miles of highways. By relocation and eliminating the unnecessary sections this would be easily reduced to less than 2,000,000 miles. Of this 2,000,000 miles some 240,000 are already improved, leaving 1,760,000 miles to be improved.

What it will cost to improve this 1,760,000 miles depends chiefly upon the type. This, in turn, should be determined by the amount and kind of traffic. Investigation has shown that 20 per cent. of our roads carry

*Extracts from a paper read before Pan-American Road Congress, Oakland, Cal., September 13-17, 1915.

approximately 80 per cent. of the traffic. It therefore follows that this 20 per cent. should be built of a more permanent, hence more costly, type, than the remaining 80 per cent. It is also true that there is a large variation of traffic on the different sections of this 20 per cent. of the system, which would mean a considerable variation in type and width, hence in cost of construction. From the foregoing it will be seen that to determine the cost of a system of roads over a given area there should be a study of the local conditions in each section of the area. This survey should include a count showing the number and kind of vehicles, with approximate loads, the population of the tributary territory, the industries of the locality and available road-building material.

We have shown that road improvement is no longer a matter of purely local concern, but of benefit to all. It is also evident that the cost in the aggregate involves a sum comparable only to the cost of our railway systems, from which it follows that we must have assistance from all possible sources. These sources are: The Federal Government, which derives its income mainly from customs and internal revenue, thus drawing indirectly from all classes; the State tax, reaching all property within the State and including all the large cities and corporations, as well as many fees and special taxes; the county and township taxes, more localized in their scope and nearer the source of the benefits, and, in addition to the above, the automobile and kindred license fees, collected from a certain part of those benefited. All of these channels are utilized at the present time except that no aid is received from the Federal Government.

If our statement is true that all the people are benefited by good roads, then all the people should share the burdens. There are in the United States many millions of people who pay no town, county or State taxes, and who can only aid in this work through indirect taxes which they pay to the Federal Government. Hence only through Federal aid can these millions be called upon to share their part of the burden.

There are certain rules which should govern in issuing bonds for road improvement.

1. Bonds should not be issued so as to place any burden upon the future taxpayer for which he does not receive full value.

2. Bonds should be issued to mature serially.

Under these rules it follows that bonds should not be issued for temporary work. It also follows that the durability of the improvement should be one of the important factors in determining the rapidity with which the bonds should be retired.

The issuing of bonds maturing serially has the advantage of avoiding the necessity for providing a sinking fund to retire them at some future date, and, what is equally important, the taxpayer is paying for the improvement at the same time that he is wearing it out. Under these rules paying for road improvements through the issuing of bonds is the most equitable system of financing. As an illustration, instead of paying this year the entire cost of improving a small piece of road, would it not be better to use the same amount of money in paying one instalment upon the cost of improving the entire road? In the first instance the community would pay the entire cost of the small part and drive through the mud on the balance of the road, while in the second instance they would have the entire road improved, and the taxpayers using the road each year thereafter would pay a share of the cost.

Another source of revenue for road construction and maintenance outside of taxation and bond issues is the automobile and kindred license fees. These fees are reaching as much as a million dollars annually in some States and are a decided help in carrying on the work. They are paid very willingly by owners of automobiles when the money is being economically used in improving the highways.

Finally, the burdens will be materially decreased by a careful, systematic and economic expenditure of the people's money. Not only that, but the people will cheerfully pay for improvements that give them value received. In many States we are still struggling with the small unit of control, which is sure to give unsystematic work and uneconomic results. Only to the extent that road construction is systematized and connected from the State department to the district organization, with trained and efficient road builders in

charge, shall we be able to give to the people the proper returns for the money expended.

I have already summarized the benefit to be derived from better roads. I have endeavored to show that while the burden is large in the aggregate, if properly distributed over a series of years, it will be comparatively small to each individual, and that the direct saving through the use of the road over a period of years will pay for the improvement; that the Federal Government should join with the State, the county and the township in carrying this burden; that the issuance of bonds for this improvement is equitable if under proper restrictions; that we should conserve all road funds by systematic work under competent direction.

Building Mountain Roads of Asphalt-Macadam

By N. BUCKNER, Asheville, N. C.

Through the country, seven miles from Asheville to Weaverville, the county commissioners of Buncombe county, Western North Carolina, are building an asphalt-macadam highway 16 feet wide, with additional



JUST AFTER A BIG BLAST AT THE QUARRY.

two-foot Telford and three-foot Telford shoulder borders. It is believed by good road enthusiasts of that section that this road is but the beginning of the building of "real roads" throughout this beautiful mountain section—roads better, more satisfactory, more lasting than



WORKING THE ROLLER ON THE ASPHALT-MACADAM.

the old macadam and sand-clay roads, of which Buncombe county has considerably more than 100 miles.

This road is being built on an old worn-out macadam road, except at a few places where the road is being changed to eliminate heavy grades. The old macadam



A SECTION OF COMPLETED ASPHALT-MACADAM ROADWAY NEAR ASHEVILLE.

is being scarified and on top of this scarification is being placed four inches of crushed stone, which is rolled down to two and a half to three inches. On this foundation, which is being prepared by the county with its convict force, under the supervision of the county road engineer and board of county commissioners, a layer of asphalt-macadam is being put down 3½ inches loose and rolled



COMPLETED ROADWAY, SHOWING TELFORD BORDER, ON LEFT.

to 2¾ inches thick. The stone in the mixture is in size from ¾ inch to 1¼ inches. It is heated to about 300 degrees and is mixed in a one-third yard mixer, 19 gallons of hot Mexican asphalt to one cubic yard of stone. On top of this 2¾-inch asphalt-macadam layer is placed a seal coat of three-quarters to one gallon of hot asphalt to the square yard, sprinkled with chipped stone and again rolled.

The asphalt-macadam coat is being placed by the Crinkley Construction Co. of Harriman, Tenn., for 72 cents a square yard. The foundation is being placed by the county at a cost of about 20 cents a yard, or \$1500 a mile. The asphalt-macadam roadway is 16 feet wide, the Telford border two feet wide flat, three feet wide with shoulder. The county authorities had the expert advice of B. H. Burrell, senior engineer of the United States Department of Public Roads, for the first two and a half months of this work.

Artificial Leather and Knitting Machinery.

Electrical Utilities Exchange, J. H. Kuhns, manager, Omaha, Neb.:

"We have inquiry from a Japanese for machinery to manufacture artificial leather and knitting machinery to manufacture socks, sweaters, yarn, etc., from raw wool. Machinery for both cotton and wool may be considered. The machinery is wanted for export to Japan. Used equipment of complete mill, in first-class condition, modern, might be considered if at a bargain. The manufacturer will personally inspect the machinery."

A \$100,000 Knit-Underwear Co.

Details are being arranged for the organization of a \$100,000 stock company to establish a knitting mill at Murfreesboro, Tenn. Those interested include Chas. C. Groat (care of Board of Trade), W. C. Bilbro, T. H. Harrison, Jas. R. Jetton and A. C. Johnson. The knitting machinery has been secured, and an equipment for a daily capacity of 300 dozen suits of underwear will be installed.

Newnon (Ga.) Cotton Mills will construct an open-room (not waste mill, as lately reported), 2½ stories high and 60 feet square. This structure will be of brick, with tar and gravel roof, costing \$10,000. J. E. Sirrine, Greenville, S. C., is the architect-engineer in charge.

Our National Honor, Even Our Existence, May Depend on Military Preparedness

By ALBERT GREENE DUNCAN, President the National Association of Cotton Manufacturers.

"Our national honor, and even our existence, may depend upon the extent and the thoroughness of our military preparedness." Thus declared President Duncan in the course of his annual address at the annual meeting of the National Association of Cotton Manufacturers at New London, Conn., last week. When the foremost business people of the country like Mr. Duncan make statements such as these, it is well that everyone should gravely consider the conditions of today. A synopsis of Mr. Duncan's address is given below.—Editor Manufacturers Record.]

With the possibility of international complications, with wars and rumors of wars filling the columns of our press and the whole universe surcharged with an intensity of feeling never known to this generation, Americans are unitedly and each for himself considering the question of national preparedness. We have for many years relied upon our splendid isolation, and neither in military preparation nor in the full development of our resources have we ever built up that independence, as a nation, that has been in relations between man and man, the keynote of our government from its inception.

As the expanse of oceans which separate our shores from possible foes have made us indifferent to admittedly inadequate provisions for defense, our separation from the severe commercial rivalries of Europe have closed our eyes to the necessity of commercial independence. Serene in our determination not to be a party to any European struggle, we never imagined we could be the victims of a quarrel not of our own making, nor that any possible embroilment of other nations could be so far-reaching that we should suffer from its effects in our world trade relations and even in our domestic affairs.

Military preparedness and industrial preparedness should go hand in hand. We have learned the sad lesson that trade relations with other countries however firmly rooted, are secondary to military exigencies. We have seen our mills handicapped and in some cases forced to close or curtail, due to shortness of wool, dye-stuffs, chemicals and other needed supplies, many of which our country would have been amply able to supply if the idea of commercial and industrial preparedness for any emergency had been kept in mind.

Our financial dependence on other nations was brought home to us very strongly in the early days of the war, and though righted temporarily by a demand for products we alone can supply, we should not overlook the fact that the present difficulty of the settlement of foreign balances in our favor may seriously curtail our prospective exports.

Our national honor, and even our existence, may depend upon the extent and the thoroughness in the next few months of our military preparedness, but as a basis and ground-work which alone can make possible the enormous expenditures involved, our domestic affairs should have equal attention. In the midst of international complications, when we know not what a day may bring forth, it is the duty of every true American to stand by the President in his effort to preserve our national dignity and honor. On the other hand, may we not urge it as an equal duty upon the President, to stand by us in an effort to bring back and maintain the business prosperity of the country?

In the crisis that confronts us, all considerations of party advantage or sectional benefit must yield to the paramount necessity of placing this nation in a position of national industrial preparedness, ready to cope with any emergency that may arise, and the party which makes this its ideal will be the one to enlist the support of the American people.

As a basis and starting point for the most complete national industrial preparedness, the public and legislative hostility to business which has been growing ever stronger during the last decade, must be allayed. This hostility has reached its climax in the legislation of the past few years, and we may well ask ourselves whether the result has aided or retarded our national development, or put us in a better position to face the new conditions which a world war has brought upon us.

Before the Civil War we were distinctively an agri-

cultural people, and not until that struggle had settled many questions of State rights did our country enter upon a national life which demanded highly developed industries. The needs of a rapidly increasing population called forth the full energies of our people to provide our new citizens, not alone with food and employment, but with all the necessities and comforts of life.

Our government took the lead in the encouragement of industry, meeting a hearty response by all classes of the people. The whole policy of the States and the nation was, in the decades of 1870 to 1890, to stimulate in every way the industrial and transportation expansion of our country. Previously, industry had been localized, but with the growth of a strong national feeling, it was inevitable that business should be also nationalized and given every aid that an intelligent and progressive government could render.

As a natural accompaniment of this industrial expansion, corporations became and are today a necessary factor in our national life. There seems, however, to be in the public mind a great misconception of what a corporation really is. A corporation is an aggregation of individuals formed to accomplish a work that would be impossible for any one of the associates acting alone. Chartered by a State, they at first engaged in enterprise within the Commonwealths that founded them, and were subject to careful supervision by the community within whose limits they operated.

A corporation, though impersonal, has no power not conferred upon it directly by the public in accordance with the laws of whose legislature it was chartered, and no right of existence independent of the will of stockholders whose money it uses.

Without the development of corporations, it is safe to say that the wonderful growth and expansion of our country during the last twenty-five years would have been impossible. Without corporations business would have been confined to local activities, for it was only by the gathering together of the savings of an army of investors, that requisite capital could be secured and energized by the great minds who conceived and carried out the plans of national development under corporate form of management.

Figures have been given many times showing that corporations are really owned by the public; that the average holding of the individual stockholder is of small amount; that the number of individuals represented in some of our greatest corporations reaches stupendous proportions, in some companies comparing with the number of employees.

Some form of regulation is undoubtedly necessary, due to the present national character of our business. This should take the form of the frankest publicity, and the laws of the Commonwealth of Massachusetts under which cotton mills have operated with fairness to their stockholders and the public, may well be taken as a model. Such regulation should provide for adequate annual statements to insure to the stockholders the safeguarding of his investment, and be the basis of credit which the corporation asks from the public. Regulation, further than this, should be undertaken only after most careful study, and should be based upon the soundest economic principles, recognizing that aggregations of capital in corporate form are necessary if business of national scope is to be carried on.

Instead of the cry of recent years to divorce business and politics, it would seem desirable that business and politics be brought closer together, and that the advice of men trained in the economics of business be sought when legislation or regulation is under consideration

affecting not alone their interests but through them the interests of the public whose property they are managing. They should not be called lobbyists and pilloried before their fellow-citizens as doing an unworthy act when advising with their representatives in Congress in an effort to enlarge or protect the industries they represent.

The hearty confidence of the public in the essential integrity of business is the basis of all true prosperity, and the people at large should recognize that the corporation is a natural and logical development, and that any legislation which tends to destroy the intricate structure of business is a backward step.

It is not in the public interest that corporations, by excessive competition or ruinous restrictive legislation, be put in a position where they cannot obtain capital for their necessary development, pay to their stockholders a fair return upon their money, or compensate their employees adequately for their labor. The public will suffer in the long run if excessive competition or restrictive legislation is carried to the point where the prosperity of the business community is not given ample consideration.

A belief in the essential unity of business prosperity and the public interest must prevail if this country is to reach that state of complete national preparedness which the present world crisis forces upon us. Unfortunately the expressions of legislative opinion and the decisions of our most important national commission fail to take this broader view that true national prosperity is inseparably dependent upon the individual prosperity of producer, consumer, stockholder and employee.

Instead we find legislative action and commission rulings tending to sacrifice one portion of our citizens in the so-called public interest. Is it not time to call a halt to this narrow view and unite in a campaign that will enlist the support of every American, standing behind the President not only in the upholding of our national honor but with his lead in the enhancement of our national prosperity?

The result of many years of agitation has culminated in the legislation of the last two years with the creation of a Federal Trade Commission with undefined powers and the forming of a Committee on Industrial Relations, which, after expending half a million dollars, ends its futile existence with as many separate reports as it has members.

Most typical, however, is the change in the economic policy of providing for national revenue, by the enactment of a tariff bill passed as a verdict against a protection for profit (this necessary adjunct of our business existence to be left to the sharpening process that the wits of our business men would undergo in a world-wide competition). Prediction was made that this law would not disturb business, would decrease the cost of living, would increase our foreign trade and would provide ample revenue for the government.

None of these predictions have been realized. The cost of living has not been reduced. Our export trade, with the exception of war orders and war food supplies, has not increased. Business has been disturbed so that only the outbreak of war and the consequent restrictions of imports saved us from disaster. The ample revenue promised has not been in evidence in spite of the extra taxation imposed under the guise of a war revenue tax to bolster up an ever-increasing national deficit.

Under normal conditions with a world at peace, it would be too much to ask that a national administration reverse itself, but in the situation that at present confronts this country, knowing the futility of the Underwood Tariff Law to raise revenue, appreciating the serious condition of the United States Treasury and foreseeing the enormous expenditures that will be necessary if national preparedness is to be but a paper plan, ought not the business interests of the country, irrespective of party, to demand that the administration meet this situation in the only way possible and give the country a tariff ample for revenue and sufficient to protect our industries from the ruin threatened by the inevitable influx of enormous quantities of cheap goods made by the starving populations of Europe after the war?

Our industries should not be dependent for their existence on the continuance of the slaughter abroad. The dawn of peace should not mark the ruin of many of our manufacturers.

Banks Active in Developing Diversified Farming.

The increase in the grain crop of the South by 34,000,000 bushels is an illustration of what can be accomplished in this section by united work on the part of all the people. Among the most active forces to whom credit should be given for the splendid work of encouraging Southern farmers to diversify their crops are the banks. While not all of them have done as much as they should have done, yet many of the banks of the South were leaders last fall and winter in turning the thought of Southern farmers to the diversification of agriculture. This has been one of the great factors in lifting the South out of the rut of concentrating its attention upon cotton and turning its thought to the raising at home of foodstuffs instead of "keeping their corn cribs and smokehouses in the West."

An illustration of the interest which some bank took in this work and the way they handled it is given in the accompanying cut, which is a photographic reproduction of an exhibit in the lobby of the Commercial National Bank of Raleigh, N. C. The officers of the bank preached diversification, and believing in the power of impression made upon the eye, prepared this exhibit, had photographs made of it and printed it on large calendars, hundreds of which were sent to the farmer friends of the bank. That this was one of the influences that helped to turn the attention of the farmers in the Raleigh section to raising more grain and depending less upon cotton goes without saying.

It will be noted that this exhibit was so arranged as to impress upon visiting farmers and all others who saw it that corn and wheat and oats and meat were of far more importance than cotton, the latter being typified in the tiny bale between the two hanging hams.

The story about the National Bank of Rock Hill, S. C., told elsewhere, is another illustration of practicing and preaching combined. This bank invested its own money without direct profit to encourage the raising of fine grade livestock, and in doing so started a movement which will doubtless have many followers to the great good of the banks and their communities.

The diversification of farming in the South, even though we never lessen the cotton crop, would, if properly carried on, soon increase the production of grain and meats to such an extent as to make this entire section look upon cotton merely as a surplus crop to be produced after the farmer had put enough land in grain and grass to provide himself with all the foodstuffs needed for his family, for his horses and his mules and his cows. Then, and not until then, will there be the true, broad prosperity to which the South is entitled. Cotton at 25 cents a pound would not be as valuable to the South in the long run as would diversification of farming and the growing at home of foodstuffs and the enrichment thereby of the soil. Western States with not one-half the advantages of the South are proving that diversified farming yields a profit to the producers and to the States at large such as the South has never had since it has learned to depend so wholly upon cotton.

Every bank, every merchant and every manufacturer throughout the South ought unceasingly to preach this doctrine, and whether cotton be 5 cents a pound or 25 cents a pound there ought never to be a let-up in presenting this truth until every farmer has won for himself that success which can come only in the long run to the farmer who lives at home. Cotton panics may come and cotton panics may go, but the farmer whose corn cribs are filled, whose smokehouses carry an ample supply of home-grown meat, whose horses and cows and mules are fed on home-grown stuff, with chickens and eggs and vegetables to meet all requirements, can laugh at the world and sell his cotton or carry it until prices meet his views, without regard to temporary fluctuations due to wars or panics or speculators.

Blankets, Glassware, Fish Oil, Etc.

G. J. Tsatsos, 37 Rue de Thermes, Athens, Greece:

"I would like to hear from your people in regard to glassware. This line will become very important so far as the Grecian market is concerned, if prices are such as will enable us to compete. The firms who decide to enter our market might send catalogue showing type

HOG AND HOMINY COME FIRST
DO YOU RAISE YOURS?
YOU CAN IF YOU WILL

DIVERSIFIED FARMING
WILL MAKE YOU INDEPENDENT OF THE
COTTON MARKET

STOP GROWING COTTON
MERELY TO BUY
MEAT, CORN AND HAY
GROW YOUR OWN AND THEN YOU CAN
LAUGH AT THE PRICE OF COTTON

and quality of goods. Also would like to get in communication with people who furnish chibacco and memosa, chestnut, fish oil and fats for tanning leather. We know prices have advanced recently on leather, so I would ask these people to send me samples of their goods, with lowest price, being careful to see that my commission of 5 per cent. is secure. We want blankets made of gray and white wool mixed, borders reinforced. Wool of good quality, well washed and free from grease. Coloring must not affect flexibility. Blankets must stand following test: Absorbing water; precipitation in distilled water; after remaining in distilled water 24 hours should be no change in color; treatment of five minutes in boiling water; treatment in a boiling solution of 3 per cent. salt for five minutes. Color must be the same after exposure of 50 to 60 hours to direct sun.

Texture must be free from knots and irregularities after fulling. Threads of warp and wool must stand usual dynamometric test. This test on one blanket out of a thousand, and if this one does not come up to requirement it will cause rejection of the other 999. The date of year is to appear on left-hand side of goods and on right side there is to be placed the words "Ellinikos Stratos"—The Greek Camp. In middle of blanket the royal crown is to be shown. Sizes should be 2m. 30 centimeters, 2m. 40 centimeters, 1m. 75 centimeters, 1m. 80 centimeters. Blankets to weigh 3000 to 3500 grams. They will be weighed and not accepted if below weight; over weight a little bit won't make any difference. Blankets must be delivered thoroughly fulling, free from grease, perfectly dry, carefully washed, and must present surface soft to touch."

Florida—The Paradoxical

By F. PAGE WILSON, Eden, Fla.

Between now and 1925, America's most conspicuous field of development will lie in the Southern States. The movement started years ago, but in the waste of post-bellum conditions required time to get into its stride. This it has now attained in earnest, and future progression will be with increasing impetus.

Florida, as the most southerly of the Southern States, is in the South and yet not exactly of it. The northerly or westerly part of the State may be sufficiently typical of the South, and it is growing; but we have reference now more to that great peninsula which juts out into the warm life-infused ocean like the index finger of the world pointing to the tropics. Italy, Greece, absolute leaders of an older world, share and enjoy a like geography. Four hundred miles of sea-girt land dipping constantly farther south, with every 50 miles of latitude making a new belt for still more tropical forms of vegetation!

That is what is meant by saying South Florida is not of the South; it is ultra-South, sub-tropical; with all the wonderful possibilities that this implies within our own domain.

It means that Florida enjoys the greatest number of growing days per year of any State in the Union; that she can produce not only most of the ordinary grains of the North, but such Southern products as cotton, sugar-cane and rice; most of the North's fruits, as well as oranges and grapefruit; to say nothing of pineapples, mangoes, avocados and a dozen other denizens of the true tropics.

In addition to all these, and of fully as much importance, her far-flung latitudinal belts give to her the power of supplying fresh vegetables to the frozen North all fall and winter and spring—in one relay after another. In other words, she is the winter garden of the continent.

Yet Florida is a paradox; probably the most misunderstood State in the Union.

Statistics show that Florida has made more progress in substantial things during the last 10 years than any State east of the Mississippi. Her population has increased over 30 per cent.; her bank deposits in far greater ratio. Income tax returns prove her to be on a level of prosperity with many States of three times her population.

The Florida agricultural department's latest biennial return showed that the value of the State's fruit product for 1913-14 reached \$13,447,000, compared with \$10,025,000 in 1911-12; field crops amounted to \$18,861,000, compared with \$16,051,000; vegetables, \$13,185,000, compared with \$8,056,000, or a sum total of agricultural production amounting to \$83,937,000 in 1913-14, compared with \$63,823,000 in 1911-12. Moreover, it is worth noting that the acreage on which this product to the value of nearly \$84,000,000 was grown only totaled 1,174,847, and this included not only fruit and truck and crops of such high value, but the ordinary farm staples as well. It would be interesting to know the number of farmers who have produced these crops. Drawing a conclusion from several sources of information to which I have had access, I should put it at 50,000 or less, although this is really little more than a rough guess.

Such figures as these show what is being done with Florida land, but they are far from showing what can and might be done. Perhaps this is one of the phases of the paradox which makes Florida at once the most beloved and the most reviled State in the Union.

You can take your first trip down the coast on a Florida railroad and be bored to death by the interminable flat pine woods, interspersed with saw-grass sloughs or an occasional clump of palms. Yet, just out of your sight you may be passing a whole community of orange or grapefruit groves which bring in for their lucky owners a steady income of \$5000 or \$10,000 per year each. Again, that green patch over yonder! It may be only a few acres, but last winter it produced for market a bonanza crop of lettuce, or celery, or tomatoes—or perhaps all three—worth a small fortune. Still another glance, and you may see a deserted field where a man planted the same crops and came out "broke." The cause? Maybe difference of soil or lack of proper preparation or of fertilizer, or poor markets, or poor handling.

The cause of failure might lie in any one of a dozen

things. Most probably, but not certainly, it lay with the man himself, for each section in Florida is a new country in itself which needs persistent, experimental effort. Perhaps next year that same man, having learned his lesson, will find Nature on his side and will reap a rich reward.

Yes, you are bored by the monotonous scenery from the train window and by the absence of activity. But if you are lucky and happen to be taken in hand by one who knows, you will be shown, not far from that same railroad, a veritable hive of busy people, where hundreds of boxes of the most luscious oranges and grapefruit in the world are being picked every day; where all sorts of vegetables in the winter, and pineapples in the summer, are shipped in carload lots; where palms and coconuts, orange groves and winter roses surround the planters' houses; where their owners live in a Garden of Eden brought up to date all the year around.

There are throughout Florida many communities such as these, and some of them are large ones. But remember! Florida is a great State, with 35,000,000 acres of land, and of these only one-tenth are in cultivation. It needs workers—pioneers; but these will find among their copioneers some of the finest people in the world—well-to-do farmers, retired business men, doctors, lawyers, editors, from every State and almost every country in the world.

For all these people Florida seems to exercise a potent lure. Many make fabulous sums of money on small tracts of land, breathe an atmosphere which tastes like the fountain of perpetual youth, and refuse to see good in any other place beneath the sun. Others are not so fortunate; they fail to find the golden key; but the lure is still there, tempting them to use greater efforts, more brain, and the key will be theirs anon. For still others—a few—there is failure, but no lure; only condemnation of the country and all that therein is.

Only last week the writer visited a new "city" in the wilderness; a city laid out on almost metropolitan lines with wide, graded streets and avenues, an imposing plaza, fine stores and business blocks, dozens of pretty bungalows and other residences, and a population of over 1000 thrifty, hustling human beings.

Eight months ago there was nothing; only a hazy idea that soon something would be doing in the mysterious region north of Lake Okechobee, whose water level had recently been lowered through the completion of the gigantic canals for the drainage of the Everglades. A few daring forerunners of the development to come had planted groves and gardens and proved the marvelous adaptability of the soil to practically every product. Then, six months ago, came the railroad; the rest has come since then.

In one East Coast county with which the writer is well acquainted, various land and colonization companies are draining nearly 200,000 acres of land, and, remember, reclaimed lands include some of the very best soil in the entire continent. Flourishing towns, small as yet, are growing up everywhere, which will act, in fact already act, as nuclei from which growth and development will ramify in every direction until they meet. Other sections of Florida show a similar process at work.

Truly, even yet there is much wilderness in Florida to affright the soul of the car-window tenderfoot. But the point is that the most difficult step for its removal, the beginning, has already been taken. Soon, from all these starting points, the work of development will spread and spread, with homes and settlements and towns converging on one another, and then will come the day of Florida as the garden spot of the Union for millions of keen-minded, scientific tillers of small tracts producing up to the limit.

But while typical, this multiplicity of small holdings, intensely cultivated in specialty crops of high value, will not by any means exhaust Florida's possibilities. The State has suffered much from the too narrow idea of specialization already.

In the old days men came to Florida to grow oranges. Grow oranges they did, and nothing else, not even vegetables for their tables or hay for their horses. Later, they planted grapefruit; planted that delectable relish of the gods so assiduously that when last winter the bottom

dropped out of the luxury market, owing to the great war, grapefruit was scarcely worth the labor of picking. And whole sections are given over to pineapples, or to tomatoes, or to celery or lettuce, and that or the other is considered the one crop to grow. While all the time the brightness of the promise held out by these bonanza crops has blinded the eyes of Florida farmers to the numberless other things which their soil would grow, not perhaps so glittering in their rewards, but more staple, and therefore surer.

Florida possesses thousands of acres of land inferior to none and superior to most for producing cotton, sugar, rice, besides a dozen other products which have only barely been tried out. Let a few of these thousands of acres be planted in "broad-farm" staples; let the specialty crops, such as fruits and winter vegetables, be limited to lands and growers and situations particularly well adapted to their production, and the market for the latter will be improved and surer; besides which, the State's revenue from the former will reach huge proportions.

Even now the cry is heard of overproduction of some of Florida's most noted products.

It is not overproduction so much as under-distribution and under-grading. This country and Canada can never have enough of Florida's incomparable oranges and grapefruit nor of her winter vegetables, when they are the best of their respective classes. But Florida growers are beginning to reap the punishment for having possessed a near-monopoly; they were careless, and shipped anything, including second-rate luxuries, for which no public will stand.

In every branch of human industry comes the day when only the best is welcome. Manufacturers or growers who cannot produce the best or will not produce it economically have to give way to those who can and will. Florida offers splendid opportunities for the expert horticulturist, and, as somebody has remarked, the grower of choice oranges belongs to the very nobility of the profession. But she offers a still wider field for those who will come and till her broad acres in staple foodstuffs, more valuable many times over than the grains which have made Northern fields world-famous.

As another example of the paradox presented by Florida, take the cattle question. Ask any newcomer to the State, or even some who have been winter visitors for years, and they will tell you that Florida is not a cow State; that cattle probably will not thrive. Yet the truth is that nowhere can cattle be produced so easily or so cheaply as in Florida. Green pasturage at all seasons; a minimum of food required to offset cold; a constant succession of forage crops throughout the year fully equal to the best which the North can provide during a limited period; no expense for shelter during the coldest weather; these are all strong points in favor of Florida only recognized in recent years.

From time immemorial, it is true, herds of semi-wild cattle have roamed the woods and prairies, utterly uncared for, with the natural results flowing from inbreeding and underfeeding. Here and there, however, in recent years improved male stock has been brought in, feed crops have been planted for successive maturity so as to avoid any cessation in the supply, and the results have been little short of marvellous.

One of the most prominent expert cattle buyers in Oklahoma, after an exhaustive investigation in Florida, had the following to say on the subject of cattle:

"Florida offers the best opportunity of any State in the Union for the raising of cattle. You have better facilities for raising cattle than any place in the United States, but the breed should be improved and attention given to the raising of proper grasses for forage. Your wild grasses are, of course, nutritious, but not good for fattening. Your cattle in Florida are the very best of any in the United States. In saying that, I mean they are better proportioned. They are small and cleanlimbed. If crossed with another breed the very best results would be obtained. I should advise crossing your native cattle. Florida beef would be the highest-priced beef on the market, and should bring \$1 more on the hundred pounds than any other beef."

Doubtless such a prophecy as the above will require time for its fulfilment. But Florida has the essentials. It has the land, millions of acres of it. It has the climate. Finally, as we know, there has been a noteworthy decrease of livestock in the whole country during last decade of something like 12,000,000 head, with a simultaneous gain in human population of nearly 17,000,000.

The livestock question is a branch of our subject which is dwelt upon at length not only because the cattle industry is one of the chief great neglected resources of the peninsular State, but because its lack of development throws another gleam of light over some of Florida's paradoxes. Let us illustrate.

Nowhere are such sensationally large returns made from an acre of land as is frequently the case in Florida. In no State have such quick fortunes from the soil been made as with her own peculiar products. Nowhere—taken as a whole—is virgin soil so lacking in the elements of plant food. Yet nowhere does soil more quickly or more abundantly respond to plenty of the right kind of fertilizer. Conversely, in no State can money be more easily sunk than here when Nature happens to act contrary or something goes wrong either with the man or his methods.

Florida soil, as we have said, while responsive, is generally not rich. Artificial fertilizers give the crops plenty of food for the time being, barring accident, but they do not create or build up soils.

With more animals on the farms—horses, cattle, dairy cows, sheep, hogs, poultry—the land would be built up permanently and would respond more surely to chemical fertilizer and to a smaller modicum. In the event of a successful crop the margin of profit would be increased; with failure, the loss of actual investment would be materially reduced, for to fertilize entirely with chemicals one of Florida's bonanza truck crops costs money. That is why her boosters and her knockers are both so many and so emphatic.

Florida has grown rich and world-famed on specialized crops. Success, it would seem, has legitimized this course, but sooner or later fundamental principles must prevail, even in Florida, the paradoxical. Permanent agriculture will be found to be based only upon a solid structure of improving soil, and this depends on livestock.

Incidentally, the industries based upon livestock will bring in just as much money as the spectacular cultures they help to make more secure.

Take dairying, for example, for which there is no more inviting field than Florida. Yet it is an industry which has only just recently got on its feet in this far 2-FLORIDA—THE PARADOXICAL..... Southern State.

In this article we have dwelt more particularly upon things pertaining to the soil, because agriculture in Florida, as everywhere else—perhaps more so—is the basis of all prosperity. This State, however, has numerous other resources—fishing, lumbering, phosphate mining, fuller's earth, furniture and woodworking, besides many other potentially important industries which should be but are not yet touched.

Proportionately greatest, however, in Florida's economy will be its basis of agriculture, and this because of its climate. We have all heard the cheap sneer that Florida possesses nothing but climate; that when you buy land it is not soil you pay for, but a foothold under the climate. Intended as a disparagement by the ne'er-do-well, there is still a substratum of truth in the sarcasm, and complimentary truth at that, did he but know it.

Granted a climate that gives from 365 to 300 growing days per annum, compared with a constant diminution down to 150 growing days the farther north you plant your crop, what limit can be set to the wonderful potentialities of this land for producing the necessities and the luxuries for 100,000,000 people living in the regions of diminishing growing days? Even if Florida soil had to be built up inch by inch before it would produce, its cultivation would still be impressively profitable. And why? Because of that same climate, which gives this land a "pull" over every other section of the United States, even though the latter's soil may be twice as rich.

True, there will be failures in adapting soil to climate, and methods to both. But what new country has escaped its quotion of failures? And Florida, true to its paradoxical nature, while the oldest discovered section of the United States, is almost its newest to develop. Thirty years or more ago a Kansas mortgage was a joke. Yet Kansas today is one of the most uniformly prosperous of these United States. Iowa, for years after that State's early settlement, could boast scarcely a farm that was self-supporting. Yet today where can be found finer farms? Farmers in those two States have now discovered the "know-how." That is the only difference.

Florida's advancement in uniform prosperity is likely to be much more rapid than in the case of the earlier settled States. Initial difficulties have been largely solved. Thousands of farmers are now coming into the State to spy out the land, realizing that their home States, capable of producing one, or at the most two crops, when all the rest of the country is doing the same thing, cannot compete in possibilities with a State which can grow three or four and choose her own time of the year. This means "possibilities," both in living and in profits.

Each year, too, brings an ever-increasing multitude of tourists, the cream of the business men and professional leaders of the North, South, East and Middle West, men who have done things and now desire a change or rest in the healing breezes of the South. Of these, an increasing number succumb each year to the lure of the sub-tropics and invest their money in Florida homes—plus climate. Thus is Florida an ideal Commonwealth in the making.

Southern Building in August.

The following figures as compiled from reports from representative cities present a brief summary of Southern and Southwestern building operations during August:

In Baltimore, Md., permits were issued for new construction to cost \$770,382, additions \$37,583 and alterations \$30,000. For the first eight months of the year the cost of new construction is estimated at \$7,151,811, alterations \$376,800 and additions \$524,470.

A total of 46 permits was issued in Richmond, Va., for new construction, estimated to cost \$102,625, and 93 permits for alterations and repairs to cost \$94,394. These figures show a decrease in the value of new construction as compared with August, 1914, of \$51,025, and an increase in the value of alterations and repairs of \$64,334, making a net increase in the value of all work authorized of \$13,609. The value of new construction for which permits have been issued from January 1 to August 31, inclusive, is estimated at \$1,890,945, and alterations and repairs at \$360,403. In Norfolk a total of 41 permits was issued during the month, representing a cost of construction of \$75,632. The cost of alterations and repairs is estimated at \$16,658.

Permits were issued in Winston-Salem, N. C., to the number of 47, which represent a cost of construction of \$92,100, exclusive of building operations just outside of the city limits. Estimating these with figures for the city proper, the value of operations will reach close to \$200,000 for the month. Eleven permits were issued in Greensboro, representing a cost of construction of \$23,337. As compared with August, 1914, these figures show a decrease of about \$6000. The cost of construction for which permits were issued in Raleigh is estimated at \$13,545, and in Durham at \$15,243. From September 1, 1914, to September 1, 1915, inclusive, a total of 187 permits was issued in Raleigh for construction to cost \$249,881.

Operations in Greenville, S. C., during the month are estimated at \$20,310, as compared with \$5120 for the corresponding month last year. August figures for Charleston are not available, but for the first eight months of the present year the cost of new construction is estimated at \$198,041, and of alterations and repairs at \$61,403.

A total of 59 permits were issued in Savannah, Ga., during August, representing a cost of construction of \$142,805. As compared with July, these figures show an increase of \$287,965. For the year ended August 31 the value of operations in Savannah is estimated at \$1,657,808. The cost of construction for which permits were issued in Atlanta during August is estimated at \$370,600, as against \$372,033 for August, 1914, and in Macon at \$37,915, the latter figures representing a total of 62 permits. From January 1, to September 1 permits were issued in Augusta for buildings to cost \$441,468.

Buildings operations are active in Montgomery, Ala., the cost of construction for which permits were issued during seven and one-half months of this year amounting to \$302,346, or within \$75,746 of the total of 1914. Permits were issued in August for construction to cost about \$61,355. A total of 560 permits was issued in Birmingham, representing a cost of construction of \$137,615, as compared with 380 permits issued in

August, 1914, representing a cost of construction of \$314,549.

In Jacksonville, Fla., a total of 34 permits was issued during August, representing a cost of construction of \$40,505, while in Pensacola the cost of construction is estimated at \$32,777. The value of operations in Miami for the month is estimated at \$44,500.

A total of 149 permits was issued in Memphis, Tenn., representing a cost of construction of \$273,295. As compared with the corresponding month last year, these figures show a decrease of 24 in the number of permits, but an increase of \$97,635 in the cost of construction.

The cost of construction for which permits were issued in Knoxville is estimated at \$46,849, as compared with \$9000 for August, 1914.

August figures for Louisville, Ky., are not available, but for the fiscal year ended August 31 operations will show a decrease of about \$700,000 as compared with the fiscal year 1913-1914. Estimating August operations at \$225,000 the total for the year just ended will reach \$3,717,040, as compared with \$4,418,770 for the previous fiscal year.

A total of 99 permits was issued in Shreveport, La., for construction to cost \$41,584, making the aggregate cost of construction for which permits were issued from January 1 to August 31, inclusive, \$506,196.

Permits were issued in Dallas, Tex., to the number of 98, involving an estimated expenditure of \$153,117. For the first eight months of the year the value of operations is estimated at \$2,235,756. In Fort Worth a total of 63 permits was issued during the month, representing a cost of construction of \$127,265. During the first eight months of 1915 permits were issued in El Paso, Tex., for construction to cost \$2,044,930, as compared with \$1,923,090 for the entire year of 1915. The cost of construction for which permits were issued in August is estimated at \$265,910. In San Antonio, Tex., a total of 160 permits was issued for August, representing a cost of construction of \$189,855, as against 181 permits for August, 1914, representing a cost of construction of \$157,500. From July 26 to August 16 a total of 41 permits was issued in Galveston, representing a cost of \$91,644. The cost of construction for which permits were issued in Waco during August was estimated at \$18,414.

In Tulsa, Okla., permits were issued for construction to cost \$91,871, and in Oklahoma City, \$86,420.

Proposed Texas Potash Development.

Referring to reports that they will develop potash deposits, Will A. Miller & Sons of Amarillo, Tex., write to the Manufacturers Records as follows:

"We have not cored the salt bed, but have bored a 2600-foot well in search of gas and oil; found that there were three strata of the potash at depths from 800, 1300 and 1700 feet, respectively, all of which runs very good. We have some 20,000 acres upon which this well is located, and we are endeavoring to get practical potash developers to take hold of the property and develop it. We are negotiating with some parties with whom we hope to make a contract. As potash is very soluble in water, it takes a special core drill and liquids to drill or core this mineral. From indications this will prove to be the best field in the country so far. We find that so few people in the United States know anything of this mineral, and the work that has been done by way of analysis and geological surveys has been by the University of Texas. Should we succeed in getting development started soon, we will, no doubt, develop something of great interest to this country; it depends largely on our success in getting hold of the right parties."

The Cotton Movement.

In his report of September 10 Col. Henry G. Hester, Secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the six weeks of the present season was 536,438 bales, an increase over the same period last year of 317,555 bales. The exports were 219,618 bales, an increase over last year of 193,386 bales. The takings were, by Northern spinners, 85,600 bales, an increase of 16,741 bales; by Southern spinners, 266,959, an increase of 182,444 bales.

CERTIFIED PUBLIC ACCOUNTANCY AS A PROFESSION.

The Independent Periodical Audit as a Safeguard for the Public.

By ELLJAH W. SELLS, C.P.A., M.A.

[Mr. Sells is author of "Corporate Management Compared with Government Control," "Cost Accounting," "Publicity of Financial Affairs of Corporations," "A Plan for International Peace."]

A public accountant is one who is skilled in the science of accounts and who offers his services to the public for various purposes, such as auditing, which embraces the verification of balance-sheet items and accounts of operations and in many cases includes a certificate to accompany the statements rendered; examining and reporting upon the affairs of those engaged in every field of activity for the most part for bankers and others interested in investments; devising and installing new systems of accounts; revising and improving existing systems, and consulting as to classification of expenditures, the character, form and order of information to be prepared from the records and presented.

The public accountant, unlike the private accountant, takes the viewpoint of an impartial outsider, does his work accordingly, and presents the results of his investigation in the form and detail which his judgment may dictate, which may or may not be in accord with the proprietor's views. The private accountant has to do with the accounts of an individual or an organization, and is usually in a subordinate capacity rather than in an independent position.

As representative of a very high type of public accountants in this country may be named the New York State Society of Certified Public Accountants, composed of accountants who have received certificates as to qualification and authority to use the title "Certified Public Accountant" from the Regents of the University of the State of New York.

As representative of the very highest type of private accountants may be named the Association of American Railway Accounting Officers, which is probably the most efficient body of private accountants in the world, having succeeded in developing for a most complicated business a simple and practically uniform system of accounting.

The antiquity of accountancy is well authenticated, and its history is interesting and instructive. There are abundant data showing the existence of private accountants in Assyria as long ago as 404-424 B. C., as must necessarily have been the case in a highly developed commercial country. The baked clay tablets which reveal the existence of these early-day accountants also indicate that their methods were very crude and that their accounts were nothing more than a record or journal of the transactions. It was not until the fourteenth century, in Italy, that accounts were put on an improved basis and double entry bookkeeping regularly employed. There are indications of the existence of professional accountants in Italy as early as 831, but the city censuses made no mention of them as such, probably because they were classed among mathematicians. In 1581 there was formed in Venice an association of accountants which in the course of time came to have more power and influence than do our present-day associations, in that no one could exercise the functions of an accountant in connection with either public administration or the law unless he were a member of this association. The requirements for admission to membership were many and exacting, and the work of these accountants was evidently held in high esteem, for in settlements of accounts those passed upon by accountants were accepted as decisive by the parties in interest.

Although there are evidences that professional accountants existed in Italy several hundred years ago, and that they have been in Scotland for over 100 years, the profession, as it is now understood, is largely a creation of the last 50 years. Hence it is of very recent origin as compared with the professions of law and medicine. In the former, which dates from the time of Moses, there have been recognized degrees for its practice as far back as 1149, but in this country there was no recognized legal organization, such as the American Bar Association, until 1878, and in the latter it is necessary only to mention such names as Hippocrates

and Galen to convey the idea of its antiquity. In England the Royal College of Physicians was projected by the celebrated Dr. Linacre in the year 1518, and this may be considered the beginning of the movement in English-speaking nations for disseminating medical knowledge through such institutions. Surgeons in England, however, were classed with barbers until 1745, from which time on a distinction between them was made and a distinguished branch of the medical profession given somewhat tardy recognition.

So far as the English-speaking nations are concerned, the Scottish appears to be the first to produce the professional accountant. The Edinburgh directory of 1773 designates seven persons in that city as accountants, although the Society of Accountants in Edinburgh was not organized until February 4, 1853, and its Royal Warrant received until October 23, 1854.

A Scottish accountant, Charles Selkrig (1760-1837), on one occasion was awarded a fee of about £20,000, which must have been a record for his time, and would be considered large even in these days.

In the United States the Institute of Accounts was organized in New York in 1882, and the American Association of Public Accountants was incorporated August 20, 1887, but accountancy as a profession in this country may be considered as beginning with the Act of the Legislature of the State of New York August 17, 1896. This act empowered the Regents of the University of the State of New York to pass upon the qualification of applicants and to grant certificates authorizing the use of the title "Certified Public Accountant." Since that time 39 other States have passed similar laws, the qualification requirements under which vary in some respects, but are practically the same. They are, ordinarily, that the applicant shall have had a high-school education or its equivalent, two or three years' experience in public accountants' offices, the necessary moral qualifications, and shall pass the prescribed examinations. There is no national law in this country relating to the profession, and, unlike the members of the legal and medical professions and some others, members of the accountancy profession are not exempt from jury service, nor do they enjoy the right of privileged communication; they are not required to obtain licenses after examination before beginning practice, and anyone can take up the practice of accountancy, no matter what his qualifications may be so long as he does not use the title "Certified Public Accountant," to which only duly authorized accountants are entitled.

In the last few years accountancy has found a place in college education, the United States being the first country to recognize the importance of establishing accountancy in college curricula. The School of Commerce, Accounts and Finance installed by the New York University in 1900 was the first of its kind in the world. Beginning in a modest way in that year, the school has had a wonderful growth until for the school year 1914-1915 it carried 2852 students on its rolls. New York University's lead has been followed by 18 other institutions in the United States, which have established separate schools for instruction in accountancy and kindred subjects, 16 of which carried 5183 students on their rolls for the school year 1913-1914.

The advancement of the profession of accountancy is keeping pace with the commercial expansion and development in this country. Its importance is recognized by governments, states, municipalities, railroad companies, manufacturing and large undertakings of every description, as is indicated by the ever-increasing extent to which the services of the members are requisitioned, as well as by the number of corporations appending to their published annual reports the certificates of Certified Public Accountants.

The independent periodical audit is a safeguard and a decided restraint upon the officers and employees of any business. By means of it investors in the securities of corporations are protected and trustees of educational and eleemosynary institutions are kept informed of financial conditions.

And perhaps more to the point than anything else: The purposes of the audit are to detect and set straight irregularities, whether intentional or otherwise. It gives to those interested in the accounts of the business examined the benefit of a broad experience as to the method of presenting the financial condition, which is of practical advantage, at a nominal expense.

In Great Britain public auditors are elected, according to legal requirements, by stockholders at the annual

meetings of corporations. No doubt the business world in this country would be better served if we had a similar law instead of leaving the selection of accountants to officers of corporations or boards of directors.

Perhaps, on account of the rapidity of its growth, however, there is occasionally found a business man who fails to understand that the members of the profession of accountancy must not be placed in the attitude of competitively bidding for work. Who would think of asking two or more members of the legal profession or of the medical profession to submit bids?

DYE-MAKING PLANT IN SOUTH.

Big Industry Backed by Big Capitalists.

[Special Dispatch to Manufacturers Record.]

New York September 15.

H. P. Bope, vice-president of the Carnegie Steel Co., is head of the Pearsite Company, reported lately in the MANUFACTURERS RECORD as having been organized under Delaware laws with a capital of \$2,000,000 and as building dye-making plant at Cannel City, Ky. This company proposes to develop a full line of colors equal to the best European products, and is now producing a the first unit of its plant a sky blue, a direct black, a benzol red, a wool black and a direct green. Bredt & Co., an old-established firm of commission merchants, who for years have handled coal-tar dyes, are agents for the Pearsite Company, and Mr. Lindemann of this company says that the colors enumerated are of the finest quality and measure up to full requirements as regards fastness, and are equal in every way to the foreign standard products. He has tested the new colors, and is convinced that they are adaptable for cotton, silk and woolen fabrics.

It is expected that by the middle of November the factory will be turning out 10,000 pounds of colors a day. The capacity will be about 5000 pounds a week until the middle of next month, but the plant is to be enlarged immediately, and the equipment for a second unit has already been bought. It is reported that contracts for the dyestuffs are being accepted and that orders will be filled in routine as received. Mr. Lindemann states that this plant will revolutionize the color-making industry of the world.

So far as known, the first announcement of the connection of Mr. Bope of the Carnegie Steel Co. with this plant was made today, and by reason of his connection and the announcement made by Bredt & Co., the agents, increased confidence has been given to the public in this undertaking.

\$500,000 Improvement Bonds Voted.

[Special Dispatch to Manufacturers Record.]

Jacksonville, Fla., September 15.

Five hundred thousand dollars of sewerage and paving bonds were voted at the election yesterday, 805 ballots being cast for the issue and 353 against.

P. A. HOLT, Acting Mayor.

To Build Big Pipe Works.

One of many recent announcements indicating the increasing demand for iron and steel products is the decision of the Jones & Laughlin Steel Co. of Pittsburgh to build big pipe works for its Aliquippa department at Woodlawn, Pa. This new mill will employ 1000 men, and is to manufacture steel pipe ranging in size from 1/4 to 16 inches. It will be in conformity to plans heretofore under consideration, and will not be in operation until about July, 1916. Included in the equipment will be two lap-weld and two butt-weld mills and a skelp mill for furnishing material. Contracts for all equipment, excepting steel building and skelp mill, have been placed with the United Engineering & Foundry Co., Pittsburgh. Contract for 12 electric traveling cranes has been awarded to the Alliance Machine Co. of Alliance, O.

MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Sterling Measuring Barrows.

Municipal and county authorities are becoming more and more stringent in the rules surrounding the proportioning of aggregates in concrete for road, bridge, sidewalk and other public work. Most of them require all the ingredients for concrete sidewalks, concrete base for asphalt pavement and creosoted block pavement, etc., to be measured accurately. In order to supply contractors with ready means of meeting these requirements the Sterling Wheelbarrow Co. of Milwaukee, Wis., has perfected a measuring wheelbarrow in two sizes, two cubic feet and three cubic feet.

The bodies of the 'barrows are guaranteed as to the



STERLING WHEELBARROW.

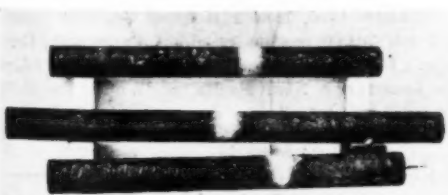
accuracy of measure when filled and scraped off. The 'barrows are made of steel throughout, the body being blue annealed steel, the handles of steel pipe and the legs and braces steel channels and bars.

A unique feature is the method of joining the legs to the handles by handle clamps at their point of great stress. Another interesting fact is that the wheel has self-lubricating bearings, consisting of an oil-impregnated fiber bushing in both bearings. This bushing, it is claimed, not only outwears brass or babbitt, but it becomes glassy smooth under use.

Welding Defective Cores in Paper Mills.

Before it was discovered that broken and defective paper cores could be repaired successfully by oxy-acetylene welding, it is stated that many carloads of cores were scrapped and sold as junk by the St. Croix Paper Co. of Woodland, Me. The cores are steel tubes three inches in diameter and average about 50 inches in length.

By using its process of oxy-acetylene welding, the Prest-O-Lite Co., Inc., Indianapolis, Ind., claims that broken cores, similar to those shown in the accompanying illustration, are now repaired in nine minutes.



No filling material is used, as a method has been found for handling the welding operation, so that sufficient strength can be obtained with the material flowed into the weld from the pipe itself. Occasionally, however, a small quantity of filler rod has been added to insure a joint that will be as strong as the rest of the core. During the welding operation the sections are slipped over an iron arbor of the same diameter as the shaft on which the roll is designed to run to insure alignment with the longitudinal center. The two sections of pipe are prepared by simply cutting off in a machine with the regular cutting-off tool. The ends of the pipe are not beveled, as the extra metal is needed where filling rod is not added.

Tests of welded paper cores indicate that the reclamation process does not affect the original strength in the least, the welded portions stand the punishment

incident to rough handling during continual shipping, although frequently the original metal in the tube is broken.

As defective cores accumulated very rapidly in the enormous production of the St. Croix Paper Co., it is stated that enough material, heretofore scrapped, is now on hand to furnish several years' supply of new cores without making it necessary to draw on any new material at all. Under the former method employed by the paper company it is estimated that 250 pounds of coal were used daily in maintaining the fire for the blacksmith's welding operation, and only a small number of cores could be repaired in a day as compared with the more economical method of welding by the oxy-acetylene process. In view of the low cost of the oxy-acetylene welding equipment required and the greater speed claimed in the repair of broken cores, a considerable saving under this method is effected by the St. Croix Paper Co.

TEXTILES

Revolution Mills' Big Addition.

Installations of machinery are about to begin for the \$1,250,000 enlargement of the Revolution Cotton Mills at Greensboro, N. C., the buildings having been completed. The weaving-room is 530x130 feet, and the carding and spinning building 470x130 feet. There will be 40,000 spindles, 1100 to 1200 looms, 200 cards, etc., in position for the manufacture of 1200 pieces of cotton goods daily, about 900 operatives to be employed. Electricity for driving the machinery will be obtained from the Greensboro transmission system of the Southern Power Co. of Charlotte, and later the company expects to build its own electric generating plant. Complete details of this Revolution enlargement were announced during 1914.

Clinchfield Mill Entirely Completed.

Last week the Clinchfield Manufacturing Co., Marion, N. C., completed the installation of its machinery as originally planned, and now has in operation its 26,000 spindles, 600 looms, etc., with daily capacity 27,000 yards of print cloth. The corporation is capitalized at \$800,000, and D. D. Little of Spartanburg, S. C., is president. It has invested \$150,000 for three-story 380x132-foot mill building, \$40,000 for 1250 horse-power steam plant having belt and rope drive, \$250,000 for spindles and looms, etc. J. E. Sirrine of Greenville, S. C., was the architect-engineer of this plant.

To Build 12,000-Spindle Mill.

Plans and specifications are being prepared for constructing a two and three-story building for the Norcott Mills, W. G. Broadfoot, secretary, Concord, N. C. The management has decided that the equipment will consist of 12,000 spindles, with accompanying machinery, for manufacturing double-carded knitting yarn, the machinery having been ordered. This company was recently announced as organized with \$250,000 capital, etc.

Building 2000-Spindle Addition.

The Pauline Mill, C. E. Niesler, proprietor, Kings Mountain, N. C., is progressing with the construction of its additional mill announced in July. A two-story brick building is being provided and 2000 spindles will be installed for manufacturing yarns for the mill's cotton damask looms, the new spinning machinery having been purchased.

To Add 102 Looms.

Additional machinery will be installed by the Postex Cotton Mills of Post, Tex., and contract for the new equipment has been awarded to the Stafford Company of Readville, Mass. It will comprise 72 cylinder looms for the manufacture of pillow casing and 30 broad looms for the manufacture of ten-quarter sheeting.

To Add 3000 Spindles.

The Sylvan Cotton Mills, Shelbyville, Tenn., contemplates adding about 3000 spindles, with the necessary preparatory machinery. In connection with this addition, the company wants to buy 20 to 24 deliveries of drawing, 12-inch coils, 9 revolving flat-top cards, 10 spinning frames, 3 to 3½-inch gauge, 2-inch rings, 7-inch traverse, fifty 36 to 40-inch automatic looms, etc.

Melville Manufacturing Co., Enoree, S. C., has organized with \$500,000 capital stock and the following officers: Allen J. Graham, president; Alexander MacBeth, secretary; each of Greenville, S. C. This company was recently mentioned as incorporated and having acquired the Enoree Manufacturing Co. with 35,000 spindles, 546 narrow looms, 350 broad looms, etc.

AN AUTOMOBILE FACTORY FOR NEW ORLEANS.

The Mohawk Motor Corporation Announces Plans for Immediate Construction.

New Orleans, La., September 8.—[Special].—Upon the heels of the announcement that New Orleans is to get the finest auto racing track in the world comes information that this city is to get its first automobile factory.

A tract of land 20 acres square, seven miles from Canal street, in St. Bernard parish, has been purchased by the Mohawk Motor Corporation of Delaware, whose New Orleans directorate is J. Bart Davis, former owner of the J. Bart Davis Piano Co. of New Orleans; John Merkl, cotton broker, and W. A. Francis, coffee merchant, all of New Orleans.

"Erection of the first unit of a model automobile factory will be begun just as soon as we can induce the farmers on the land at present to vacate," said J. Bart Davis, president of the corporation, at his offices, 1100 Ilibernia Bank Building.

"The Mohawk car is to be strictly a MINO (made in New Orleans) product," Mr. Davis continued. "We have engaged the services of a well-known Michigan designer, who will be in the city within a few weeks to look the situation over. Work on the factory under his supervision is to begin within 60 days—perhaps 30—or just as soon as the present tenants can remove their belongings from the land the company purchased."

The land is directly on the St. Bernard shell road, and is excellently situated for the purposes of the promoters, as the Louisiana Southern Railroad passes directly to the south of the property. It was purchased from the Borgnemouth Realty Co., of which Sylvester P. Walker is president and O. S. Livaudais secretary. One of the stipulations of the deed was that an automobile factory be erected on the property. The price was not made public.

Mr. Davis said that he and his associates had been looking the situation over for three months, and that he was convinced that this city offered manufacturing advantages superior to any in the South. He declared that the success of the Mohawk car was assured from the start, basing this prediction on the fact that automobile factories all over the country are running full time and are still supplying only 60 per cent. of the demand.

"There is no question," Mr. Davis said, "that we will have a market for the first car we make and for succeeding thousands. We expect to put New Orleans on the map as an automobile manufacturing city, and who knows but that before many years we will outstrip Detroit itself."

"The Mohawk Motor Corporation is capitalized at \$100,000; we expect to spend twice that amount on our New Orleans factory, railroad facilities, etc., and we are in such a position financially that for the present we will not offer a single block of stock for sale. Mohawk stock is at present selling 80 per cent. above par; so you can see that we are not very anxious to dispose of any."

"We intend to build what will be the only auto assembling shop in the entire South. We will spare no expense in making the Mohawk car one of the best on the market. Just at present we plan to make two types of Mohawks, a five and a seven-passenger body; but these, of course, are rather premature announcements."

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NORFOLK & WESTERN'S PROGRESS.

Costly Improvements Made and Others Now Building—Increase in Net Earnings.

While the annual report of the Norfolk & Western Railway for the company's year which ended June 30 does not show progress in the shape of growth of total transportation revenues because they were lessened by the business depression, and the increase in net was accomplished by a large decrease in operating expenses, it exhibits liberal and gratifying advancement in the work of improving the facilities of the system and increasing its operating capacity. Some of the construction which has been and is being done merits particular attention; for instance, the building of an entirely new section of main line 37 miles long from Pamplin to Burkeville, Va., which will afford a low-grade route for eastbound traffic and which was decided upon in preference to double-tracking the existing road between those points. This work will not only cost less than the improvement of the old road, but it will have better grades and curves. The maximum grade will be 0.1 per cent. and the maximum curvature 1.5 degrees. It is to be ready for use in January.

Besides completing the double-track work in progress when the last annual report was issued, the company is now making double-track improvements between Jack and Ford, Va., 13.58 miles, which is to be finished by December. This will afford the company a total of 686.24 miles of double-tracked line between Norfolk, Va., and Columbus, O., besides about 20 miles of single track. This estimate considers the low-grade lines around Petersburg and Lynchburg, the Big Sandy line and the new line building from Pamplin to Burkeville as second tracks.

There have also been finished and put in service the North Carolina division of the Virginia-Carolina Railway to Elkland, N. C., 48.64 miles, at a cost of more than \$1,200,000, and the extension of the New River, Holston & Western Railroad from Rocky Gap to Suiters, Va., nearly 14 miles, at a cost of \$253,857.60. Two or three coal spurs are also being constructed.

Concerning the electrification of the main line between Bluefield and Vivian, W. Va., 29.35 miles, the report says that the traffic results already obtained from this work indicate that the capacity of the line has been doubled and that the operating cost per ton mile will be materially reduced. The construction is practically finished and eight of the twelve electric locomotives ordered are in use. The electrification cost up to June 30 was the sum of \$3,128,224.04.

The company also obtained during the year new equipment as follows: Forty freight locomotives (not including the electric engines mentioned in the preceding paragraph), 5 all-steel dining cars, 2 all-steel flat-bottomed gondola cars of 180,000 pounds capacity, 537 all-steel hopper coal cars of 115,000 pounds capacity, 88 steel underframe cabin cars, 2 steam derrick cars, 2 locomotive cranes and 1 harbor barge. The flat-bottom gondolas, the hopper coal cars and the cabin cars were all built at the Roanoke shops of the road.

Many additions and betterments were made to the permanent way and structures. This included the relaying of 108 miles of main line with 100-pound rails, the installation of more automatic signals and interlocking plants, the replacement of several old bridges and trestles with stronger and better structures, the lining of several tunnels with concrete, and the elimination of 15 highway grade crossings.

Among the new industries established along the road are 15 manufactories of mineral, metal and other products, 13 of lumber products, 6 of farm implements and farm products, and 6 coal mines. At Hopewell, Va., on the City Point branch, the extensive nitro-cellulose plant established by the E. I. du Pont de Nemours Powder Co. is already making an average daily shipment of 20 cars of nitro-cellulose. At the end of the year there were 146 companies organized for producing coal and coke along the lines of the company, with a total of 233 separate mines, of which 214 were in actual

operation. There were 2034 coke ovens in blast out of a total of 13,931. There were also 5 iron furnaces, with a total daily capacity of 930 tons, in blast out of a total of 22, with a total daily capacity of 3490 tons.

The income statement for the year shows: Total transportation revenues, \$42,483,310.36; decrease, \$1,700,131, or 3.85 per cent.; total operating revenues, this including revenue from operations other than transportation, \$42,987,043.77; decrease, \$1,663,265.77, or 3.73 per cent.; total operating expenses, \$27,831,815.35; decrease, \$2,303,591.33, or 7.64 per cent.; ratio of expenses to total operating revenues, 64.74 per cent.; decrease, 2.75 per cent.; net revenue from railway operations, \$15,155,228.42; increase, \$640,325.56, or 4.41 per cent.; railway operating income after taxes, etc., \$13,275,462.41; increase, \$380,293.41, or 2.95 per cent.; gross income, \$15,318,695.80; increase, \$146,775.10, or .97 of 1 per cent.; net income, \$10,400,904.86; decrease, \$52,521.62, or .5 of 1 per cent.; income balance transferred to profit and loss, \$9,390,233.86; decrease, \$52,524.62; total balance to credit of profit and loss, \$14,384.09; increase, \$1,819,043.18, or 14.18 per cent.

The balance sheet displays total assets of \$289,651,259.81, of which \$256,206,630.19 represents the investment in road and equipment.

Houston to San Antonio.

Plans for the construction of an interurban railway from Houston to San Antonio, Tex., about 180 miles, are under consideration. Ed. Kennedy of Houston, who for some time has been working on plans for the Houston & Richmond Interurban Railway, which company was organized to build about 25 miles from Houston to Richmond, Tex., recently addressed members of the Chamber of Commerce and other business men at San Antonio concerning a proposition to extend the proposed road to that city. This idea was endorsed, and it is stated that Mr. Kennedy will present the plan to a financial syndicate. The charter will be amended to permit of the further construction in view. One of the routes under consideration is from Houston via Richmond, Rosenberg, Gonzales and Seguin to San Antonio; another is via Wharton and Yoakum.

May Change Route.

With reference to the plans for building the Norfolk, Washington & New York Railroad from Newport News, Va., to Washington, D. C., a report from Norfolk says that interests in that city have been added to the promotion of the enterprise and that a change may be made in the contemplated route. This is said to be to avoid building a bridge across the Potomac River by connecting with the existing lines entering Washington from Richmond. It is said that it would cost \$1,000,000 to bridge the Potomac as planned, and that use of the existing bridge would enable the road to make the same time as if the originally chosen route were followed. Col. T. D. Hobart, a civil engineer, is reported co-operating with Channing M. Ward of Richmond, who is president and chief engineer of the proposed line.

Improvements at Cravens Yards.

The Nashville, Chattanooga & St. Louis Railway Co. has removed its entire mechanical plant from Chattanooga, Tenn., to Cravens Yards, four miles south of that city, thus doing away with switching service in the central yards. There have been installed at Cravens additional switching tracks, a three-story stucco office building, sand houses and oil houses, and a 90-foot turntable with concrete base and electric tractor. It is contemplated to build car-repairing sheds, and construction has been authorized for an incline to be used in transferring freight to and from the river.

Southern Railway's Improvements.

The Southern Railway Co. has awarded a contract to J. P. Pettyjohn & Co. of Lynchburg, Va., to build at Spartanburg, S. C., new facilities, including one-story inbound freighthouse 40x250 feet, with two-story office section, materials to be used being brick, with concrete

floor and fireproof roof, and rolling doors of steel; also one-story outbound freighthouse 22x250 feet, of frame construction with concrete floor and base and fireproof roof. There will be four house tracks, with a capacity of 32 cars, and four team tracks with a capacity of 29 cars. All teamways of vitrified brick. A pillar crane of 20 tons capacity will handle heavy freight. Construction will be rushed.

The railroad company has also recently rebuilt and converted 1000 old cars into steel underframe box cars at its various shops, and also at the Lenoir Car Works, Lenoir City, Tenn. Another 1000 cars will be similarly converted in time for use in moving this year's crops. There have also been acquired during the past year 3250 new steel underframe box cars, which, with the cars rebuilt, will give the system more than 5000 cars of large capacity, in addition to the many other cars on its lines.

Extension to Darby, N. C.

The Watauga & Yadkin River Railroad has finished grading on its extension as far as Darby, N. C., and the track is now laid to a point within one mile of that place. Three small bridges are still to be completed, and, while the track may not be laid into Darby by the middle of this month, as expected, it should be all done to that point by October 1 if no further delays occur. Darby is about 15 miles from Blowing Rock and 18 miles from Boone, N. C., the county-seat of Watauga county. H. C. Landon, general manager, says that the line is doing a fair business under the circumstances, but that traffic will largely increase after it reaches Darby. The address of the company is North Wilkesboro, N. C.

New Equipment, Etc.

Illinois Central Railroad will buy 50 Mikado type locomotives. It is also expected to soon give orders for 2000 freight cars, including 1000 box cars and 1000 refrigerator cars, most of the former being for the Central of Georgia Railway.

Norfolk & Western Railway will purchase 30 Mallet type locomotives.

Hiwassee Valley Railway, Andrews, N. C., will purchase rails for its line now building from Andrews to Hayesville, N. C., 25 miles.

Atchison, Topeka & Santa Fe Railway has ordered 500 stock cars from the Pullman Company, Chicago. The road is also expected to soon order locomotives.

Alexandria (La.) Street Railway will purchase some new cars, and also repair and rebuild several of its old cars.

Atlantic Coast Line has ordered from the Pullman Company 1 passenger and baggage car, 3 baggage and mail cars and 2 passenger cars.

Texas & Pacific Railway, which is in the market for 10 switching engines, 6 passenger engines and 6 freight engines, has ordered 13 locomotives from the Baldwin Works, Philadelphia.

Tennessee Coal, Iron & Railroad Co., Birmingham, will roll 20,000 tons of rails for the Atlantic Coast Line. It is expected that a large part, if not all, of the Louisville & Nashville Railroad's order for 43,000 tons will also be rolled by the same mill. It has likewise been placed with the United States Steel Corporation.

Edenton Mills' Addition.

Plans and specifications will be prepared by C. B. Makepeace & Co., engineers-architects, Providence, R. I., for the Edenton (N. C.) Cotton Mills' addition recently announced. The company will erect a one-story 80x72-foot structure and two two-story structures 101x52 and 80x56 feet, of mill construction. It will install 8000 spindles, with accompanying machinery, to be driven by electricity generated from steam power.

Ashcraft Cotton Mills, Florence, Ala., will add 100 automatic looms and has awarded contract for this new weaving machinery to the Draper Company of Hopdale, Mass. This company lately mentioned as to add machinery.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Record of Week's Progress in Improvements in City and Country.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Amarillo, Tex.—City voted \$50,000 bonds for street paving.
Berkeley Springs, W. Va.—City voted \$15,000 bonds for street paving.
Rutledge, Tenn.—Grainger county voted \$200,000 bonds for roads.
Columbia, Ky.—Adair county voted \$120,000 bonds for roads.
Martinsburg, W. Va.—City voted \$15,000 bonds for street paving.
Park City, Tenn.—City authorized \$90,000 bonds to pave Magnolia avenue; length, 10,100 feet.
Sanford, Fla.—Seminole county voted \$250,000 bonds for 35 miles of brick, shell and sand-clay roads.
Sumter, S. C.—City voted \$250,000 bonds to improve streets.
West Point, Miss.—Clay county will issue \$20,000 bonds for road construction.

Bonds to Be Voted.

Corsicana, Tex.—City votes October 12 on \$125,000 bonds to improve streets, etc.
Corsicana, Tex.—City votes October 10 on \$80,000 bonds to improve streets.
De Land, Fla.—Volusia county, New Smyrna District, votes October 12 on \$250,000 bonds to construct roads.
El Paso, Tex.—El Paso county votes October 12 on \$30,000 road bonds.
Greenville, N. C.—Pitt county, Falkland township, votes September 21 on \$50,000 bonds to construct roads.
Jefferson City, Mo.—Cole county votes October 19 on \$100,000 bonds for roads.
Miami, Fla.—Dade county votes in October on \$275,000 bonds for Tamiami road construction.
Orange, Tex.—Orange county, Fourth precinct, votes October 16 on \$7000 bonds to shell or gravel portion of road.
Shelby, N. C.—Cleveland county, No. 3 township, votes October 16 on \$30,000 bonds to construct roads.
Tahoka, Tex.—Lynn county votes September 18 on \$25,000 bonds for road construction.
Tulsa, Okla.—City will vote on \$20,000 bonds to construct roads.
Winchester, Tenn.—Franklin county votes September 17 on \$350,000 bonds to construct roads.

Contracts Awarded.

Baltimore, Md.—Dr. Walter F. Wicks awarded contract to construct driveway costing \$14,000.
Brownsville, Ky.—Edmonson county awarded \$14,000 contract for 3½ miles of turnpike.
Canton, Tex.—Van Zandt county awarded contracts for road construction, for which \$160,000 is available.
Charleston, W. Va.—City awarded \$73,598.61 paving contracts.
El Paso, Tex.—Jas. G. McNary and others awarded \$45,000 paving contracts.
Elizabethtown, Ky.—Hardin county awarded contract for four miles of Dixie Highway.
Gueydan, La.—City awarded \$7000 contract to lay concrete sidewalks.
Hopkinsville, Ky.—Christian county awarded \$24,611.64 contract to construct six miles of road.
Lake Charles, La.—Calcasieu parish awarded \$31,082 contracts for road improvements.
Memphis, Tenn.—City awarded \$22,204.14 paving contract.
Tallahassee, Fla.—City awarded \$67,000 contract for paving streets with brick.

St. Louis, Mo.—City awarded \$82,000 paving contract.
Vanceburg, Ky.—Lewis county awarded \$25,121 contract to grade and shape river road.

Walnut Cove, N. C.—City awarded contract for construction of cement sidewalks for four blocks on both sides of Main street.

Contracts to Be Awarded.

Baltimore, Md.—City receives bids until September 22 for 8500 square yards sheet asphalt on portion of The Alameda.

Baltimore, Md.—City receives bids until September 22 for 18,800 square yards sheet asphalt, 18,800 square yards bituminous macadam and 24,000 square yards reinforced concrete paving.

Beaumont, Tex.—City will lay about three miles of paving.

Rutherfordton, N. C.—City will pave section of Main street; \$8900 estimated cost.

Columbus, Miss.—Lowndes county will expend \$100,000 to construct 20 miles of macadam roads.

Columbus, Miss.—Lowndes county, Fourth district, will expend \$100,000 to improve roads.

Derma, Miss.—City invites bids until October 5 for constructing 1800 square feet of concrete sidewalks.

Greensboro, N. C.—Guilford county will build two miles macadam road costing \$25,000.

Gaffney, S. C.—City receives bids until September 22 for 3750 square yards sheet asphalt, vitrified brick or cement-concrete paving, etc.

Bardwell, Ky.—Carlisle county will soon contract for six miles of road, with culverts, etc., estimated to cost \$10,821.

Lake Village, Ark.—Town invites bids until September 25 for concrete or brick paving materials.

Lebanon, Mo.—City and Laclede county will expend about \$30,000 during 1916 on rock and gravel roads.

Mayo, Fla.—Lafayette county will have plans prepared for road construction to cost \$300,000.

Perry, Fla.—Taylor county will have plans prepared for hard-surface roads to cost \$500,000.

Ponchatoula, La.—Tangipahoa parish appropriated \$12,000 to improve road.

Princeton, Ky.—Caldwell county invites bids until September 27 for two miles macadam State-aid highway.

Tazewell, Tenn.—Claiborne county receives bids until October 8 to grade and macadamize 103 miles of road.

West Palm Beach, Fla.—Palm Beach county plans to construct 100 miles of road, and has nearly \$800,000 available.

Wichita Falls, Tex.—City will pave two miles of streets.

Winston-Salem, N. C.—Forsyth county will build two miles of road.

Georgia to Hold Big Road Meeting.

Under the auspices of the Georgia Chamber of Commerce a State-wide road meeting will be held in Macon on September 29 and 30 for the purpose of perfecting plans for financing and constructing a network of highways that will radiate from each of the five principal cities of Georgia—Savannah, Atlanta, Macon, Augusta and Columbus.

The meeting at Macon will especially deal with a plan for 12 roads to extend from Macon to the State lines. Five or more of the main arteries are to be chosen from each of the cities named, and meetings have been arranged as follows to select the best-suited roads. Savannah, October 27 and 28; Augusta in November, Columbus in December and Atlanta in January.

Those presenting routes for consideration must show an agreement with their various county boards, covering a period of five years, insuring necessary improvements to roads. In addition, citizens and property-owners along the highway must agree to remove obstructions from the roads and keep drains open. The county will be required to send a scraping gang over each road once every three months, and further agree to send a gang to any particular spot for emergency work when so directed by the committee.

The system of roads planned will be under the active charge of the good-roads committee of the Chamber of Commerce. This committee will be composed of two men from each congressional district, and will maintain a secretary and general office at Macon.

Select Dixie Highway Route in Florida.

At a well-attended and enthusiastic meeting of the Central of Florida Highway Association at Lakeland last week, the route of the Dixie Highway in that State, from Tallahassee to Miami, was officially designated. This route will extend from Tallahassee through Perry to Gainesville, Ocala, Orlando, Kissimmee, Lakeland, Bartow, Arcadia, to Fort Lauderdale and Miami.

A number of auxiliary routes were also officially recognized, these leading from various points on this section of the Dixie Highway to cities and towns on the west coast.

At this meeting the people of Florida also showed their interest in the Lee and Jackson Highway, proposed by the MANUFACTURERS RECORD. They designated the Jacksonville Scenic Highway from Jacksonville to Orlando, Lakeland and Tampa as the official route of the Lee and Jackson Highway in Florida.

It was decided to hold another meeting of the association in Gainesville on December 9.

\$5,865,000 for Florida Roads.

During this year there has been especial activity throughout the State of Florida in providing county bonds for the construction of modern highways, the largest recent issues totaling \$5,865,000. This amount includes \$800,000 for Palm Beach county, which has sold bonds; Seminole county, \$450,000 voted; Pinellas county, \$750,000 voted; Orange county, \$600,000 voted; Lake county, \$500,000 voted; Polk county, \$1,000,000 to be voted upon; Lafayette county, \$300,000 to be voted upon; Taylor county, \$500,000 to be voted upon; Hillsborough county, \$1,000,000 being expended. The Polk county vote is intended to provide funds for constructing 208 miles of 15 and 9-foot highways.

Dixie Highway Meeting in Jacksonville.

Plans are rapidly being completed for the Georgia-Florida Dixie Highway meeting to be held in Jacksonville, Fla., September 28 and 29.

This meeting was inaugurated by the Chamber of Commerce of Jacksonville to promote greater interest in the development of the Dixie Highway and branch highways and the establishment of good roads generally in Georgia and Florida.

State, city and county authorities, commercial organizations and business men generally are co-operating to have a large attendance of those throughout the two States who are interested in the highway improvement.

Votes \$50,000 for Dixie Short Route Road.

A letter to the MANUFACTURERS RECORD from C. B. Parrigan, county judge, Albany, Clinton county, Ky., advises that their county has voted \$50,000 in bonds to build a road through the county to be part of the "Dixie Short Route," extending from Cincinnati to Chattanooga, at which points it will connect with the Dixie Highway, north and south. The survey of the road is being conducted by the county, with F. S. Parrigan of Albany, Ky., as engineer in charge.

To Mine North Carolina Mica.

A 226-acre mica property at Elkville, N. C., will be developed by the Virginia-Carolina Mica Co. of Staunton, Va., which has incorporated with a capital of \$10,000. I. N. Graham, Deerfield, Va., is president; G. P. Gibson, Allegan, Mich., vice-president, and Herbert J. Taylor, Staunton, secretary-treasurer.

Will Change to Electric Drive.

The Granite Falls Manufacturing Co., Granite Falls and Hickory, N. C., will build a 45-foot dam and change its present equipment to the electric drive throughout, cotton yarn being the product. Plans and specifications are being prepared by Tucker & Laxton, engineers, Charlotte, N. C., and bids will soon be invited. The estimated cost is \$40,000.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ark., Ashdown.—Little River County Commissioners let contract Miller & Caldwell of Texarkana to construct 16 concrete bridges in Little River county on improved roads now under construction.

Ark., Little Rock.—Henry Levinson, Supt. of Public Works, is preparing plans for concrete bridge 101 ft. long and 17 ft. wide to replace wooden structure over Worthen Bayou at foot of Lincoln Ave.; estimated cost, \$3000.

Ark., Marion.—Crittenden County Comms. are considering proposition to construct viaduct from approaches of Harahan bridge, now being built, to levee 2 mi. distant; structure to be probably about 16 ft. above ground and 24 ft. wide; proposed to organize improvement district to include territory within radius of 40 to 50 mi. of western approach to Harahan bridge; estimated cost, \$350,000.

Fla., Titusville.—Brevard County Comms. let contract Champion Bridge Co. of Wilmington, O., at \$10,500 to construct concrete bridge across Crane Creek; plans, which were submitted by Champion company and approved, call for structure 112 ft. long, 12 ft. above minimum water level, with concrete retaining walls at both ends.

Ga., Cedartown.—City contemplates erection of concrete bridge at south end of Main St.; probably span of about 60 ft., 30 ft. wide and height 8 ft. above low water; H. N. Van Devander, City Engr. (See Machinery Wanted—Bridge Design.)

Ga., Guyton.—Bulloch County Comms., Statesboro, Ga., and Effingham County Comms., Springfield, Ga., let contract East-ering & Easterling of Daisy, Ga., at \$5790 to construct steel bridge across Ogeechee River to connect 2 counties. (Call for bids lately noted.)

Ky., Bardwell.—Carlisle County Fiscal Court will construct 25-ft., 15-ft. and 2 30-ft. steel, concrete spans, 1 beam encased in concrete; 21 pipe culverts, 12 in., 18 in. and 24 in.; 6 concrete culverts, comprising 46.9 cu. yds. reinforced concrete; E. C. Walk, Jr., Engr., Clinton, Ky. (See Road and Street Work.)

Ky., Nicholasville.—Jessamine County Commissioners let contract Empire Bridge Co.,

Frick Bldg., Pittsburgh, Pa., at \$3295 to construct steel and concrete bridge across Hickman Creek on Chrisman Mill Rd.

Md., Baltimore.—State Roads Com., 601 Garrett Bldg., will construct reinforced concrete bridge (16-ft. span), girder construction, over Meadow Creek along Meadow Branch turnpike, west of Westminster; also repoint walls and coping Jug Bridge over Monocacy River; bids until Sept. 28. (See Road and Street Work.)

Mo., Joplin.—City, Kansas City Southern Ry. and Joplin Union Depot Co. will erect lately-noted bridge; cost \$30,000; plans not fully completed; structure of reinforced concrete; 320 ft. 5% in. long and 24 ft. wide. (City lately noted voting \$13,500.)

Okla., Ada.—Pontotoc county will not vote this year on previously-noted bonds for bridge construction; A. L. Miles, County Clerk.

S. C., Charleston.—Charleston Southern Ry. (W. R. Bonsal, People's Office Bldg.) let contract Gadsden Contracting Co. of Savannah, Ga., to construct bridge across Black River on north side of Hutchinson Island.

S. C., Columbia.—Seaboard Air Line Ry., W. D. Faucette, Chief Engr., Norfolk, will construct steel and concrete bridge across gulch in Blanding St. at Gadsden St.; 111 ft. long; 70 ft. wide; each side to be flanked with granolithic sidewalk, one 13 ft. wide and other 7 ft.; roadway paving of brick; concrete railings to guard each border; electric lighting; let contract Jonas & Garrettson of Columbia and Palm Beach, Fla.; A. E. Legare of Columbia to be supervisor.

Tenn., Chattanooga.—Nashville, Chattanooga & St. Louis Ry., H. McDonald, Chief Engr., Nashville, will confer with County Engr. relative to constructing viaduct over tracks where new route of Wauhatchie pike crosses at Lookout Station; concrete; cost \$15,000.

Tex., Cleburne.—City will construct concrete bridge over West Buffalo Creek on Poindexter Ave.; 120 ft. long; 20 ft. wide; arch under bridge for storm sewer. Address The Mayor.

Tex., Denison.—City voted bonds to construct reinforced concrete and steel viaduct 1800 ft. long to connect business and south-

ern sections of city; estimated cost, \$50,000. Address The Mayor. (Lately noted.)

Tex., Canadian.—Hemphill County Comms. let contract Canton Bridge Co. of Canton, Ohio, at \$66,710 to construct bridge across Canadian River; 2550 ft. long; 150-ft. spans. (Call for bids lately noted.)

W. Va., Huntington.—Cabell County Commissioners let contract A. T. Thompson at \$9101 to construct bridge over Fudges Creek in Grant Dist.

W. Va., Logan.—Logan County Comms. let contract Virginia Bridge & Iron Co. of Roanoke, Va., at \$2223 for steel work on bridge across Big Creek, and at \$3084 for steel work on Huff Creek Bridge; Pete C. Minotti for concrete and masonry work on Big Creek Bridge and R. J. Armstrong Construction Co. for substructure of Huff Creek Bridge.

W. Va., Williamson.—City of Williamson and Pike county, Kentucky, will construct bridge across Tug River at Williamson; A. C. Pinson, Mayor; H. H. Stallard, Pike County Judge, Pikeville, Ky.

CANNING AND PACKING PLANTS

S. C., Cheraw.—Eureka Canning Co. (lately noted inceptd., capital \$25,000), Loran A. Kerr, Prest.-Treas., will establish (demonstration) plant near Cheraw with daily capacity 9000 cans tomatoes (mainly) and sweet potatoes; will erect, by local labor, a \$500 building; has purchased materials, also machinery, for present plant; contemplates installing larger plant another season. (See Machinery Wanted—Canning Machinery.)

COAL MINES AND COKE OVENS

Ky., Perry County.—Eberton Coal Corp. organized with offices at Abingdon, Va.; owns coal and timber lands on North Fork of Kentucky River in Perry county, on Louisville and Eastern Division of Louisville & Nashville R. R.; will lease coal land to operators; W. E. Mingea, Prest.; W. E. Mingea, Jr., V.-P., both of Abingdon; Chas. C. Cooke, Secy., Roanoke, Va. (Lately noted chartered with \$100,000 capital stock, etc.)

Okla., Muskogee.—Oklahoma Consolidated Coal Co., capital \$50,000, inceptd. by R. T. Price, E. A. Jennings and E. R. Jones.

Tenn., Knoxville.—Black Diamond Colliers, capital \$200,000, inceptd. by Paris A. Haynes, W. J. Baker, Tivis McAllen and others.

Va., Crews.—Wilson-Berger Coal Co., capital stock \$350,000, inceptd.; C. E. Wilson, Prest., Crews; T. C. Berger, Secy.-Treas., Chatteroy, W. Va.

W. Va., Mistletoe.—Silush Coal Co., capital \$50,000, organized with E. B. Siler, Prest.; A. O. Siler, Secy.-Treas.; C. C. Lovett, Gen. Mgr.; is establishing plant.

W. Va., Powhattan.—Powhattan Coal & Coke Co. will build combination wood and steel tiple to replace structure reported burned at loss of \$35,000 to \$40,000; contract placed.

CONCRETE AND CEMENT PLANTS

Okla., Sapulpa.—Oil Tanks.—International Crude Oil Storage Co., 415 Berryhill Bldg., W. M. Bowles, Prest., Shawnee, Okla. (lately noted organized), will open proposals Nov. 10 to erect 55,000-bbl. fireproof underground storage tank for oil; E. L. Gibbs, Constr. Engr. (See Machinery Wanted—Concrete Tank.)

COTTON COMPRESSES AND GINS

Ark., Rector.—Ed. King Mercantile Co. will install gin.

Ark., Rector.—S. Unterberger will install gin.

Fla., Jacksonville.—Company will be inceptd. by C. P. Kendall and C. H. Pillsbury of Jacksonville and Robt. Harrison of Hazlehurst, Ga.; plans to establish cotton gin.

Ga., Flowery Branch.—Flowery Branch Gin Co., capital \$5000, inceptd. by F. T. Davie, A. J. Mundy and Mrs. B. Williams.

La., New Orleans.—New Orleans Pickery Co., A. D. Brady, Secy.-Treas., 824 Gravier St., will erect lately-described building; 50x125 ft.; mill construction; concrete floors; steel roller doors; sprinkler system; watchman's clock; install electric presses and possibly driers; handle all grades burnt,

damaged and irregular cottons. (See Machinery Wanted—Presses (Cotton), etc.)

Miss., Kosciusko.—Planters' Oil Mill & Gin Co. plans to install equipment to clean and bleach cotton lintens and delint for powder purposes; daily capacity, 50 bales. (See Machinery Wanted—Cotton Machinery.)

S. C., Laurens.—Wood & Pitts are reported to install two 50-saw gin plants.

Tex., Brownsville.—People's Ice & Mfg. Co., S. C. Tucker, Prest. and Mgr., will rebuild lately-noted cotton gin by day labor; 1-story 25x70-ft. ordinary-construction building; machinery supplied.

Tex., Taylor.—Monodale Gin Co., capital \$10,000, inceptd. by T. E. Burns, J. P. Nelson and Chas. H. Burns.

DRAINAGE SYSTEMS

Ark., Swifton.—Cook Slough Drainage Dist., Jackson county, receives bids until Oct. 6 at Newport, Ark., to construct about 164,000 cu. yds. main ditch and 81,000 cu. yds. lateral excavation, drainage district near Swifton; Ferdinand Tonnyse, Secy., Swifton; W. A. Bowman, Engr., Remmel, Ark. (See Machinery Wanted—Drainage.)

Fla., Bradentown.—Manatee County Comms. let contract Edgar Chapman, Plant City, Fla., at about \$112,568 to construct Gamble Creek drainage canal; 1,340,000 cu. yds. excavation; drain about 21,000 acres.

Fla., Palatka.—Putnam county, Bostwick Dist., contemplates issuing \$25,000 drainage bonds; D. P. Hancock, Chrmn. Drainage Board.

Ga., Watkinsville.—Rose Creek Drainage Assn. petitioned Oconee County Drainage Court to authorize bond issue to construct drainage system to reclaim 700 to 1000 acres; cost \$14,000 to \$16,000.

La., Lafayette.—Lafayette parish, Indian Bayou Sub-Drainage Dist. of Drainage Dist. No. 1, votes Oct. 2 on tax to construct drainage system. Address Police Jury.

Tex., Liberty.—Liberty county, Raywood Drainage Dist. No. 2, contemplates issuance of bonds to construct drainage system.

ELECTRIC PLANTS

Ala., Austinville.—Alabama Power Co., F. H. Chamberlain, Gen. Mgr., Birmingham, Ala., applied for light and power franchise, to include street lighting; if franchise is granted, will extend secondary main from New Decatur to Austinville.

Fla., Lake Wales.—Florida Ice & Power Co. inceptd.; E. C. Stuart, Prest. (See Ice and Cold-storage Plants.)

Ga., Coolidge.—City engaged W. Hopson Goodloe, American National Bank Bldg., Macon, Ga., to prepare plans and specifications and supervise construction of improvements to electric-light system. (Previously noted.)

Ky., Louisville.—H. P. Selman & Co., 4th and Walnut Sts., is reported as considering plans for private lighting plant to be operated by oil engine.

La., Bogalusa.—Public Utilities Com. accepted report of G. U. Borde of New Orleans relative to constructing electric-light plant, water-works and sewer system; citizens will meet in Oct. to consider \$300,000 bond issue.

Mo., Blue Springs.—J. C. Waugh will rebuild burned electric-light plant and ice factory.

Mo., Branson.—Ozark Power & Water Co. is perfecting plans for extending electric-light system to various cities of west-central Missouri and possibly Kansas.

Mo., Drexel.—City will construct electric-light plant to cost \$8000; Bicknell Co., International Bldg., Kansas City, in charge of engineering.

Mo., West Plains.—City is considering plans for improvement of electric-light plant. Address The Mayor.

N. C., Lumberton.—City will improve electric-light system; install about 6 mi. 220-volt primaries and secondaries, series tungsten street light system, switchboard and transformers; Engr., Gilbert C. White, Charlotte, N. C.; lately noted. (See Machinery Wanted—Water-works and Electric Light System.)

Tex., Brownsville.—City contemplates extension of ornamental lighting system at cost of \$4500. Address The Mayor.

Tex., San Augustine.—City Council appointed committee to investigate and make report on cost of erecting electric-light plant. Address The Mayor.

Va., Hopewell.—Prince George Electric Light & Power Co., capital \$100,000, incptd.; H. D. Eichelberger, Pres., Chester, Va.; M. H. Mulligan, Secy., Richmond, Va.; W. H. Hoyt, Gen. Mgr., Hopewell.

FERTILIZER FACTORIES

Fla., Fort Pierce.—Florida Products Co., capital \$100,000, incptd.; Robt. A. Hammond, Pres.; Harry Dutton, V.-P. and Treas.; Adrian M. Sample, Secy.

Ga., Savannah.—Virginia-Carolina Chemical Co. (main office, Richmond, Va.) is reported to remodel buildings and install additional equipment, including machinery to manufacture sulphuric acid.

Md., Baltimore.—Baugh & Sons Co., 25 S. Calvert St., will erect sulphuric-acid plant at fertilizer factory at Clinton and 11th Sts., Canton; capacity, 90 tons daily; 75x275 ft.; 2 stories; construction of steel, brick and corrugated iron; cost about \$40,000; contract for lead work installation let to Jas. Robertson Lead Co., 827 S. Howard St., Baltimore; Peter S. Gilchrist, Archt.-Engr., Charlotte, N. C.

S. C., Charleston.—Virginia-Carolina Chemical Co., Richmond, Va., will develop marl beds on Ashley River, several miles from Charleston; will construct building and install machinery for annual capacity 30,000 tons marl fertilizer; equipment to include crushing machinery; has ordered machinery.

Va., Battery Park—Lime.—Battery Park Fish & Oyster Co. will double capacity of plant for manufacturing agricultural lime from oyster shells; now burns lime; expects to install grinder.

Va., Smithfield.—James River Marl Fertilizer Co., capital \$150,000, incptd.; L. C. W. Page, Pres.; Ernest R. Page, V.-P.; W. S. Webber, Secy.-Treas.; all of Norfolk, Va.; will dig and crush marl for fertilizer; initial daily capacity, 2500 tons.

FLOUR, FEED AND MEAL MILLS

Ark., Marianna.—Lee County Milling Co. organized to build flour mill.

Ga., Tallapoosa.—C. W. Jackson and Mr. Lovorn will install roller process flour mill; sliding nearing completion.

Miss., Brookhaven.—Dixie Creamery Co. proposes to manufacture feed for cattle and stock in connection with creamery. (See Miscellaneous Factories.)

Mo., Renick.—Randolph Milling Co. capital \$10,000, incptd. by F. C. McAfee, II. D. Wilcox and L. G. McAfee.

N. C., Durham.—G. F. Pope will install 50-bbl. flour mill; let equipment contract to Salem Foundry & Machine Works of Salem, Va.

S. C., Bennettsville.—Farmers' Milling Co., capital \$500, incptd. by R. L. Kirkwood, John F. Everett and D. D. McColl.

S. C., Bennettsville.—R. L. Kirkwood will install 50-bbl. flour mill; let equipment contract to Salem Foundry & Machine Works of Salem, Va.

S. C., Walterboro.—Home Milling Co. organized by G. Moore Rivers, J. W. Westcott and others; will establish meal and grist mill.

Tenn., Carthage.—Rexoda Milling Co. organized with W. M. Garrett, Pres.; R. W. Boston Secy.-Treas., and John Williams, Gen. Mgr.; install flour and feed mill; will remodel building.

Va., Charlottesville.—Standard Grist Mill, capital \$10,000, incptd.; E. L. Carroll, Pres. and Treas.; N. N. Carroll, Secy.; both of Shipman; J. P. Carroll, V.-P., Charlottesville.

FOUNDRY AND MACHINE PLANTS

Md., Baltimore.—Structural Steel.—Carnegie Steel Co., Bush and Wicomco Sts., Baltimore, and Pittsburgh, proposes to extend plant for fabricating structural steel; not prepared to make any further statement.

Md., Baltimore.—Steam Pumps.—Geo. A. Boyden Pump Co., capitalization \$1,500,000, incptd.; Geo. A. Boyden, Pres.; J. Calvin Boyden, V.-P.; Harry C. Irwin, Secy.; Geo. A. Boyden, Jr., M. E. Supt.; executive offices in Md. Casualty Bldg.; proposes to build plant for manufacturing steam pump invented by Geo. A. Boyden; arrange for subsidiary plants at Kansas City and San Francisco.

Md., Baltimore.—War Munitions.—McNeill Ornamental Iron & Construction Co., Bar-

ney St., corner West Fall, increased capital stock from \$1000 to \$25,000 and secured privilege of manufacturing war munitions.

Tenn., Knoxville.—Valves.—Robinson Balance Slide Valve Co. organized with Bird M. Robinson, Pres.; Herman P. Robinson, V.-P.; Dr. Frank P. Robinson, Secy.-Treas.; will market patented valve for use on engines; at present valve will be manufactured in 3 Knoxville plants. (Lately noted incptd. with \$150,000 capital.)

Tex., Beaumont.—Implements.—Beaumont Implement Co., capital stock \$20,000, incptd. by H. A. Perlstein, Sol E. Gordon and F. R. Sonnemann.

Tex., Houston.—Machinery.—Garner-Regin Machine Co., capital stock \$10,000, incptd. by Herbert Godwin, James C. Garner and Edgar L. Pearson.

GAS AND OIL ENTERPRISES

Ala., Blue Mountain.—Alabama Power Co., Birmingham, Ala., will extend Anniston gas-distributing system to Blue Mountain. (See Ala., Oxford.)

Ala., Oxford.—Alabama Power Co., F. H. Chamberlain, Gen. Mgr., Birmingham, Ala., will make two extensions from Anniston gas-distributing system; one to Blue Mountain (site of American Net & Twine Co.'s plant) and one to Oxford via Oxanna. (Lately noted.)

Fla., Tampa.—Mexican Petroleum Co., 1015 Security Bldg., Los Angeles, Cal., let contract Riter-Conley Co. of Philadelphia, Pa., to build two 55,000-bbl. oil tanks for oil-storage depot at Hooker's Point; plant to be located on 20-acre site and comprise 2 oil tanks, pipe lines and pumping station; let contract Edwards Construction Co. of Tampa; to prepare site for tanks and lay pipe lines; Philip Shore, representative at Tampa. (Lately noted.)

W. Va., Powhattan.—Powhattan Oil & Gas Co., H. C. Barlow, Pres., has municipal franchise to lay gas mains.

W. Va., Parkersburg.—Gas Plant.—Combination Gas Co., capital \$5000, incptd. by C. D. Bungardner, A. E. Keney, L. H. Carle and others.

ICE AND COLD-STORAGE PLANTS

Ala., Mobile.—Terminal Transfer & Storage Co. will include cold-storage installation in proposed terminal improvements. (See Miscellaneous Construction.)

Fla., Jasper.—C. W. Smith is reported to remove ice plant to new location and build cold-storage warehouse for meat and produce.

Fla., Lake Wales.—Florida Ice & Power Co., capital \$100,000, incptd.; E. C. Stuart, Pres.; G. V. Tillman, V.-P.; E. D. Edis, Secy.-Treas.

Fla., Marianna.—City voted \$17,000 bonds to build 15-ton ice plant. Address The Mayor. (Lately noted.)

Fla., Tampa.—J. C. Williams and G. H. Whitmore will build ice plant; daily capacity about 60 tons; purchased machinery.

Ga., Bainbridge.—Nussbaum Ice Co.'s contract for ice plant (lately noted let to Richardson Engineering & Constructing Co., Bainbridge) calls for 2-story fireproof building with composition roof, concrete floors and steam heat; size 80x125 ft.; cost, without equipment, \$34,000; plans by Van R. H. Greene, 346 Broadway, New York.

Ga., Rome.—Rome Ice & Cold-Storage Co. will build 15-ton ice and cold-storage plant. (Lately noted organized with \$35,000 capital.)

Mo., Blue Springs.—J. C. Waugh will rebuild burned ice factory and electric-light plant.

PROPOSAL ADVERTISEMENTS

IN THIS ISSUE

PUBLISHED ON PAGES 80 and 81.

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Fla., Tallahassee.—B. M. Cates, R. O. Collins, Chas. Williams and A. A. Burns are organizing company with \$30,000 capital to drill for oil.

Ky., Clinton.—Reelfoot Lake Oil Co., capital \$50,000, incptd. by E. B. Samuels, W. D. Ward, Ed Williams and R. B. Flett.

La., Shreveport.—Railway Employees' Oil Co., capital \$35,000, incptd.; J. F. Labane, Pres.; A. B. Stringer, V.-P.; W. W. Pate, Secy.-Treas.

La., Thibodaux.—Galdry Gas & Oil Co., capital \$50,000, incptd.; W. H. Price, Pres.; Thibodaux; Calvin C. Wurzlow, V.-P.; Houma; L. B. Juillat, Secy., Thibodaux.

Mo., Kansas City.—Big Six Petroleum Co., capital \$500,000, incptd. by J. C. Wolf of Kansas City, Porter O. Minor, Emsworth, Pa., and John R. Brown of Pittsburgh, Pa.

N. C., Wilson.—Gas Plant.—City engaged Anderson & Offutt of Charlotte, N. C., as engineers for gas plant; \$75,000 bonds lately noted voted; Theo. A. Hinnant, Town Clerk. (See Water-Works.)

Okla., Clinton.—Oil Refinery.—Washita Valley Refining Co. organized to build \$20,000 refinery to manufacture motor oil.

Okla., Cushing.—Cushing Field Oil Co., capital \$50,000, incptd. by C. M. Van Pelt, Frank Broadwell and Louis Macklanberg, all of Oklahoma City.

Okla., Ringling.—Harris-Strawn Oil Co., capital \$50,000, incptd. by Geo. W. Strawn of Ringling, Jas. A. Harris and W. H. Harris of Wagoner, Okla.

Okla., Tulsa.—Thornton Oil & Gas Co., capital \$4800, incptd. by J. T. Cobb, Geo. T. Williamson and E. H. Young.

Tex., Houston.—Onalaska Oil Co., capital \$5000, incptd. by J. M. West, C. B. Graberry and T. H. Monroe.

Tex., Trinity.—First Trinity Oil Co., capital \$15,000, incptd. by Geo. Costas, Peter Cavatos and Nicholas Andricos.

Ky., Carlisle.—Carlisle Electric Light & Power Co. will probably install 20-ton ice plant.

La., Amite.—Central Light & Power Co., H. E. Burnham, Mgr.-Treas., contemplates installing 6-ton ice plant. (See Machinery Wanted—Ice Machinery.)

La., Lockport.—J. M. Summerhill, New Orleans, will establish ice factory.

N. C., Lumberton.—E. H. Holloway (care of Kingsdale Lumber Corp.) contemplates building 10-ton commercial ice plant. (See Machinery Wanted—Ice Machinery.)

N. C., Waynesville.—W. R. Harbeck and T. C. Young of Columbia, S. C., plan to build cold-storage warehouse for fruit. (See Land Development.)

Okla., Altus.—Altus Ice Co., W. H. Echols, Mgr., will build ice-storage and cold-storage warehouse about 25x80 ft.; provide space for storage of fruit and produce; also contemplates enlarging ice factory.

Okla., Muskogee.—Southern Fish & Oyster Co. will install additional refrigerating plant with capacity of 6 tons or more.

Tex., Mexia.—Central Texas Ice Co. increased capital stock from \$60,000 to \$120,000 and changed name to Central Texas Ice, Light, Power & Water Co.

IRON AND STEEL PLANTS

Ga., Atlanta.—Steel Furnace.—Atlanta Steel Co. is now installing additional open-hearth furnace (its third), being the furnace in contemplation for some time; complete in about 30 days; not prepared to state details. (Atlanta Steel Works lately reported to install additional furnace, etc.)

W. Va., Weirton.—Sheet Steel, etc.—Phillips Sheet & Tin Plate Co. will install additional mills and build addition to Weirton Steel Co. plant it recently purchased, as lately reported; not now prepared to state further details.

IRRIGATION SYSTEMS

S. C., North Anderson.—Jas. F. McClure, Jr., 211 Webb St., Anderson, will irrigate 5 acres farm land. (See Machinery Wanted—Irrigation.)

Tex., El Paso.—Jas. G. McNary (of First National Bank), Joshua S. Reynolds, W. H. Austin and others will develop residential district; 164 acres; plotting 40 acres for initial development; drill wells for water supply and series of small lakes; let contract Texas Bitulithic Co. of Dallas at about \$45,000 for street paving; has let contract for wells.

LAND DEVELOPMENTS

Fla., Palatka.—Florida Farms and Homes, capital \$1,000,000, incptd. with Jas. R. Murphy, Pres., 31 Nassau St., New York; Norman W. Keller, Treas.; Wm. Pedrick, Jr., Secy.; T. J. Conin, Supt.; each of Palatka; purchased New South Farm & Home Co. properties, including 150,000 acres in Marion, Putnam and Clay counties, Florida; lands 49 mi. long, varying from 1/2 to 20 mi. wide; include towns of Orange Springs, Fort McCoy, Burbank, Kenwood, Interlachen, Island Lake and parts of Silver Springs and Palatka.

Fla., Tallahassee.—Bonheur Development Co., capital \$30,000, incptd.; B. M. Cates, Pres.; R. O. Collins and Chas. Williams, V.-Ps.; B. B. Cates, Secy.-Treas.

Fla., Tampa.—J. A. Weaver (Chairman of Committee), H. C. Macfarlane, Guy Nickerson and others are promoting development of 40 acres of Old Tampa Bay; plan to expend about \$100,000 to construct boulevards and seawall, dredge in front of property, build recreation pier, etc.

Ga., Savannah.—Georgia Land & Cattle Co., capital \$50,000, incptd. by T. B. Lawson, Lawrence Manning and L. Brown.

Mo., Springfield.—Missouri-Arkansas Development Co., capital \$5000, incptd. by K. V. Loba and H. S. Wickersham, President and Secy.-Treas., respectively, of Ozark Ry. Co.

N. C., Leaksville.—Fitzgerald Farm Corp., capital \$50,000, incptd. by T. B. Fitzgerald, E. S. Gray and E. Wilton Brown.

N. C., Waynesville.—W. R. Harbeck and T. C. Young of Columbia, S. C., purchased 300-acre orchard; plan to extend and develop orchard and to build cold-storage warehouse for fruit.

Okla., Bartlesville.—City, C. A. Lamm, Mayor, will make lately-noted park improvements; 70 acres adjacent to city; include bathing beach, bathroom, racetrack, grandstand, drives, walks, tennis courts and boat-house; landscape architect, W. H. Dunn, 715 Republic Bank Bldg., Kansas City, Mo.; John R. Baird, Secy. Park Board.

Okla., Walter.—Walter Development Co., capital \$50,000, incptd. by Geo. W. Graham, B. S. Coleman, L. B. Solman and others.

S. C., Great Falls.—Great Falls Farms Co., capital \$1,000,000, incptd. by H. A. Tibbs of Great Falls, N. A. Cooke and E. C. Marshall of Charlotte, N. C.

Tex., Donna.—Donna Irrigation Dist. No. 1, Hidalgo county, will vote Sept. 17 on \$850,000 bonds to finance the district, taking over present canal system and making improvements and extensions.

Va., Norfolk.—Chesterfield Syndicate Corp., capital \$10,000, chartered; A. W. Lillendahl, Pres.; J. L. Rohleder, V.-P.; J. W. Euston, Secy.-Treas.

Va., Richmond.—Woodlawn Development Co., capital \$10,000, incptd.; Chas. Wright, Pres.; M. H. Wright, V.-P.; W. L. Spain, Secy.-Treas.

W. Va., Princeton.—Princeton Development Co., capital \$10,000, incptd. by W. S. Dangerfield, H. E. DeJarnette, Irvin A. Downey and others.

LUMBER MANUFACTURING

Ala., Mobile.—Royal Street Lumber Co. increased capital from \$200 to \$500.

Ala., Mobile.—Vaughan Lumber Co., capital \$5000, incptd.; H. C. Vaughan, Pres.; W. K. Syson, V.-P.; F. L. Thornhill, Secy.-Treas.

Ga., Tallapoosa.—C. W. Jackson and Mr. Lovorn will remodel sawmill.

Ky., Ashland.—Kelly Lumber Co. incptd. by S. S. Willis, Thos. L. Kelly and Margaret Kelly.

La., New Orleans.—W. W. Carre Lumber Co. will rebuild mill building lately noted burned; 80x120 ft.; cost \$3000.

N. C., Asheville.—Southern Lumber Co., capital \$100,000, incptd. by David and M. L. Jacobson and Arch. D. Monteath.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

N. C., Seven Springs.—Virginia Lumber & Box Co., Petersburg, Va., purchased timber land near Seven Springs and will develop; has 50-acre site for plant.

Okl., Broken Bow.—Choctaw Lumber Co. will build hardwood mill; daily capacity 75,000 ft.; estimated cost \$100,000.

S. C., Greenville.—Neard Lumber Co., capital \$10,000, inctpd. by F. A. Lawton, E. Neely and O. M. Howard.

Tex., Sherman.—Hall Lumber Co., capital \$25,000, inctpd. by W. D. Hall, W. O. Hall and W. G. Moss.

Va., Fredericksburg.—Geo. C. Brown & Co., A. T. Quick, Lynchburg, Va., Mgr. in Virginia, will operate lately-noted plant to manufacture cedar lumber; plant built and equipped.

METAL-WORKING PLANTS

Ala., Birmingham.—Tin Cans, Buckets, etc. G. L. McCullough, Box 306, interested in plan to establish factory for tin cans, buckets, etc. (See Machinery Wanted—Metal-working Equipment.)

Ky., Paducah.—Wrenches.—Sure Grip Fire Hydrant Wrench Co., capital \$1000, inctpd. by A. L. Hays, A. N. McKinney, C. H. Gentry and R. M. Hays.

Md., Elkton.—Specialties.—Metal Specialties Mfg. Co., capitalization \$25,000, inctpd. by Clement M. Egner and others.

MINING

Ala., Ashland.—Kaolin.—A. A. Northern (V. P. First National Bank) is interested in proposed development of kaolin deposits.

Ga., Canton.—Mica.—American Mica Co. organized with Aug. Rust-Oppenheim as Pres. and general office at 52 Broadway, New York; Lachlan Taylor, V. P., is in charge of developments at Canton; not now prepared to state development details. (Lately noted organized with \$100,000 capital stock, etc.)

Mo., Cartersville.—Lead and Zinc.—Burnham & Young will develop 40 acres sheet ground; propose to expend \$12,000 in preliminary work, and if conditions are satisfactory will build 500-ton mill.

Mo., Duenweg.—Lead and Zinc.—D. A. Mansur of Kansas City and J. C. Wright of Cartersville plan development of 6-acre lease and construction of 150-ton mill.

Mo., Joplin.—Lead and Zinc.—Ben Franklin Mining Co., capital \$50,000, inctpd. by D. D. Dewing, R. A. Pearson, Ina A. Dewing and others.

Mo., Joplin.—Lead and Zinc.—Three Sisters Mining Co., capital \$50,000, inctpd. by J. H. Rose, H. H. Givan and Thomas Jones.

Mo., Tahoma.—Zinc and Barytes.—Tahoma Zinc & Barytes Mining Co., capital \$10,000, inctpd. by F. C. Bryant, C. W. Missner and Robt. Heidrick.

Okl., Commerce.—First Chance Mining Co., Tulsa, Okla. (lately noted inctpd., capital \$25,000), will develop 10 acres; daily capacity about 5 tons; H. F. Broach, Pres., Meridian, Miss.; Walter G. Hodges, V. P., Meridian; W. E. Broach, Box 555, Tulsa, Secy.-Treas.

Okl., Tulsa.—Lead and Zinc.—Oklahoma City Consolidated Lead & Zinc Co., L. L. Hutchinson, Pres., contemplates installing additional mill of about 500 tons daily capacity on lease adjoining LaNora B mine.

Okl., Tulsa.—Croesus Mining Co., capital \$200,000, inctpd. by C. W. Day of Tulsa, A. E. Bonnell of Muskogee, Okla., and D. W. Cooter of Miami, Okla.

Tenn., Ducktown.—Copper.—Tennessee Copper Co., 2 Rector St., New York, is reported to have completed plans to sell \$2,000,000 bonds for alterations and extensions to plant; understood that these additions are necessary because of large contracts for chemicals used in manufacturing high explosives; recently mentioned as arranging for these contracts. (Reported in June as to install additional unit, increasing sulphuric-acid capacity from one-half to one-third, etc.)

Tenn., Hartrant.—Zinc.—Powells River Zinc Co. organized by Dan Cooper Swab and others; develop zinc land in Claiborne county.

Tenn., Mt. Pleasant.—Phosphate.—Hoover & Mason, 1407 Railway Exchange, Chicago, Ill., purchased lately-noted 180 acres phosphate lands in order to increase their holdings of Tennessee phosphate rock, this being one of several properties acquired during the past few years.

Tex., Amarillo.—Potash.—Will A. Miller & Sons, lately reported to develop potash, advises they have located 3 strata of potash in various depths in 2600-ft. well (which was bored for gas and oil) and are negotiating

with interested parties relative to development of the potash; well is on 20,000-acre tract owned by Miller & Sons.

W. Va., Charleston.—Gold.—Kanawha Gold Mining Co., capital \$225,000, inctpd. by W. G. Morris, S. A. Moore, L. A. Cockran and others.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Docks, etc.—Terminal Transfer & Storage Co., J. H. Quill, Secy.-Treas., will, upon completion of lately-described terminal improvements, have 1½ ml. dockage, with trackage provision for 250 cars; improve 33 acres; include space for protected storage, open storage, yard storage, cold storage, U. S. bonded warehouses, elevators and dockage; plans and specifications are being completed. (For additional details see Manufacturers Record, Sept. 9.)

Ark., McGeehe.—Levee.—R. T. Clarke & Co. have contract to close gap in lower Red Fork Levee.

Fla., Jacksonville.—Swimming Pool.—City will construct reinforced concrete swimming pool about 100x40 ft. and ranging from 4 to 10 ft. in depth near 7th St. and Boulevard in Springfield Park; Committee on Public Works, S. C. Harrison, Jr., Chrmn., City Engineer Bldg., Main and Orange Sts., receives bids until Sept. 27; plans and specifications furnished by Commr. of Public Works, Engineer Bldg. (See Machinery Wanted—Concrete Pool.)

Fla., Jacksonville.—River Terminals.—Commodore Point Terminal Co. let contract Seaboard Dredging Co. at about \$100,000 for dredging and filling in of bulkheading at new terminals being erected at Commodore Point; Wade, Powers & Wade have contract for bulkheading. (Further facts lately noted.)

Fla., Miami.—Canal Locks.—Internal Improvement Board, Tallahassee, let contract to construct locks in Caloosahatchee, North New River and Hillsboro canals.

Fla., Sarasota.—Pier, etc.—City recreation pier plans are not yet accepted; as (lately noted) drawn and submitted to Council by Geo. L. Roberts, they include 700-ft. pier, 24 ft. wide, automobile drive in center, and walks on each side; 125-ft. pavilion at end; bathhouses and bathing beach; pier to have reinforced concrete foundation, with wooden upper structure; cost about \$7000.

La., Alexandria.—Levee.—Red River, Atchafalaya & Bayou Boeuf Levee Board let contracts Lower Coast Construction Co. to construct Alto to Crooked Bayou levee, on Atchafalaya River, 350,000 cu. yds.; Simmesport to Deer Range levee, on Bayou Des Glaizes, 150,000 cu. yds.; rejected bids for White Place to Wilson Point levee, on Red River, and invites new bids until Sept. 22.

La., New Orleans.—Earthwork.—Government will construct about 1,033,400 cu. yds. earthwork in Lower Tensas and Atchafalaya Levee Dists.; bids received at U. S. Engr. Office, Queen and Crescent Bldg., New Orleans, until Sept. 28. (See Machinery Wanted—Earthwork.)

Miss., Waveland.—Seawall Comms. of Dist. No. 1, Hancock county, Chas. G. Moreau, Pres., Bay St. Louis, will construct concrete seawall on beach front from Bay St. Louis, Waveland dividing line, to northeast line of Waveland terrace; wall to be not less than 750 ft. nor more than 500 ft.; bids until Sept. 29; lately noted. (See Machinery Wanted—Seawall Construction.)

Tex., Waxahachie.—Ellis County Drainage Dist. No. 2 voted \$125,000 bonds to construct levee to protect about 12,000 acres land on Trinity River. Address County Comms. (Lately noted.)

W. Va., Huntington.—Block-signal System.—Ohio Valley Electric Ry. Co. will install automatic block-signal system.

MISCELLANEOUS ENTERPRISES

D. C., Washington.—Workshop.—Mrs. Rachel E. Trimble let contract to S. A. Gaskins & Sons, 510 Washington Loan & Trust Bldg., Washington, to erect workshop at 1315 C St. N. W.; 2 stories; brick and cement; cost \$3600; Macnell & Macnell, Archts., Union Trust Bldg., Washington. (Noted in Aug.)

Ga., Augusta.—Hardware.—Bowen Bros. Hardware Co., capital \$30,000, inctpd. by Chas. W. Bowen and Guy M. Bowen.

Ky., Clay.—Laundry.—Clay Electric Light & Power Co. contemplates building laundry.

La., Shreveport.—Large Linc.—E. K. Smith, O. A. Wright and others are organizing company to operate barge line on Red River.

Mo., Avilla.—Grain Elevator.—Farmers' Elevator Co., capital \$5000, inctpd. by E. E. Bush, S. J. Salter and George O. Wilson.

Mo., Kansas City.—Printing.—Marlborough Press Co., capital \$5000, inctpd. by Chas. A. Ellis, Myra A. Ellis and John E. Cassidy.

Mo., Kansas City.—Construction.—Universal Concrete Construction Co., 215 Glendale Bldg. (lately noted inctpd., capital \$5000), organized; M. F. Rhodes, Pres.; A. L. Gowey, V. P.; C. V. W. Saylor, Secy.-Treas.; has equipment.

N. C., Newbern.—Abattoir.—City will build abattoir; main building not less than 40x80 ft.; floor space enclosed on all sides and fly-proof; concrete floor; sufficient quantity of water to be supplied and cold-storage plant of adequate capacity; Board of Aldermen receive bids until Oct. 5; F. T. Patterson, City Clerk.

N. C., Winston-Salem.—Contracting.—E. B. Newkirk Co., capital \$25,000, inctpd. by E. B. Newkirk, O. W. and W. T. Baynes, Jr.

Okl., Asher.—Bridge Contracting.—Asher Bridge Co., capital \$5000, inctpd. by W. M. White, D. F. Christ, E. I. Majors and others.

Okl., Chickasha.—Hardware.—Chalfant Hardware Co., capital \$12,500, inctpd. by A. V. Chalfant, L. C. Hutson and R. H. Smith.

Tenn., Morristown.—Construction.—Lee J. Smith Construction Co., capital \$5000, inctpd.; Lee J. Smith, Pres.; H. B. Williams, Secy.-Treas.; conduct general contracting, including grading and water-bound macadam; has equipment.

Tenn., Nashville.—Cumberland Springs Co., capital \$100,000, inctpd. by E. M. Riddle, J. F. Burnham, W. R. Marshall and others.

Tenn., Paris.—Dry Cleaning.—Paris Dry Cleaning Co., capital \$10,000, inctpd. by A. Davis, H. N. Armstein, Sam Levy and others.

Tex., Austin.—Laundry.—Austin Laundry & Dry Cleaning Co., 1504 Lavaca St. (lately noted inctpd., capital stock \$18,000), is installing new machinery in 2-story 42½x127-ft. \$14,000 building; Chas. Bartles, Pres., Treas. and Mgr.; O. Harry Schmidt, V. P. and Secy.

Tex., El Paso.—Bitulithic Contracting.—El Paso Bitulithic Co. inctpd. by W. J. Rand, W. A. Johnston and M. E. Newell.

Tex., Hereford.—Hardware.—Dunlap Hardware Co., capital stock \$7500, inctpd. by Eli Dunlap, W. E. Dunlap and W. L. Brodie.

Va., Lambert's Point.—Grain Elevator.—Norfolk & Western Ry. J. E. Crawford, Ch. Engr., Roanoke, Va., is reported as planning construction of grain elevator to cost \$1,500,000; concrete and steel fireproof construction; 1,000,000 bus. capacity; considering elevator with conveyors to deep water or elevator in deep water with chutes for loading vessels.

Va., Norfolk.—Contracting.—Tidewater Truckers' Turnpike Co., capital \$8000 to \$10,000, inctpd. by L. D. Starke, H. B. Goodrich, M. C. Ferebee and others; plans to purchase turnpike and bridges in Norfolk city and Norfolk and Princess Anne counties.

MISCELLANEOUS FACTORIES

Ala., Brundidge.—Peanut Oil Mill.—O. E. Hightower, C. W. Hightower and E. M. Hightower will build peanut oil mill; purchase machinery.

D. C., Washington.—Post Boxes, etc.—National Parcels Post Box & Tag Co., capitalization \$75,000, inctpd. by Martin E. Smith, T. Morley Smith and Artemas Smith; to manufacture boxes and tags for parcels post uses.

D. C., Washington.—Paper.—District of Columbia Paper Mfg. Co., Water and Potomac Sts. N. W., will erect additions to present plant on K St.; additions to be built sectionally, and when completed form single building 7 stories high; fireproof; 200x150 ft.; 30,000 sq. ft. space on each floor; wired-glass windows; reinforced-concrete work; automatic sprinkling system; garden and gymnasium on roof; no subcontracts to be let, as construction is to be undertaken by company's employees; plans by company's draftsman.

Fla., Carrabelle.—Naval Stores.—Tacoma Naval Stores Co., capital \$25,000, inctpd.; C. B. Coombs, Pres.; D. P. McKenzie, V. P.; M. C. Townsend, Secy.-Treas.

Fla., Jacksonville.—Bottling.—Jacksonville Coca-Cola Bottling Co., capital \$10,000, incorporated; T. C. Parker, Pres.; T. C. Parker, Jr., V. P.; H. E. Barnett, Secy.-Treas.

Fla., Miami.—Pin-ap-ola.—Pin-Ap-Ola Co., 801 Longacre Bldg., New York, will erect lately-noted factory for preserving pineapple juice; J. J. Warren interested; now arranging for construction of plant.

Fla., Okeechobee.—Bakery.—A. Herka will build bakery; 2 stories; frame; 24x30 ft.

Fla., Tampa.—Soap.—Royal Palm Soap Co., capital \$50,000, inctpd.; I. Berner, Pres.; T. A. Zoucks, V. P.; W. A. Walke, Secy.-Treas.

Fla., West Palm Beach.—Motion Pictures.—Southern Motion Picture Corp. will build plant; stated that room for making indoor scenes will be entirely of glass and be provided with 8 stages.

Fla., Umatilla.—Bakery.—Barron Bros. will build bakery.

Ga., Athens.—Sausage.—S. and L. Cutler leased building on River St. and will equip as sausage factory.

Ga., Chibley.—United Mfg. & Warehouse Co., capital \$10,000, inctpd. by H. C. Kimbrough, L. E. Floyd, P. L. Hopkins and others.

Ga., Douglas.—Mattresses and Excelsior.—W. F. Scoggins will build factory for daily capacity 25 cheap mattresses, 20 high-grade felt mattresses and 1 car excelsior; contemplates incorporation, capital \$5000.

Ga., Douglas.—Marble Yard.—L. K. Youmans will establish marble yard; investment, \$7000.

Ga., Thomasville.—Bottling.—Georgia Paraffin Co. is being organized by F. D. Dismuke and J. W. Dillon; will install bottling plant; secured old water plant and remodel.

Ky., Caney.—Dyes.—Pearsite Co., capital stock \$2,000,000, inctpd. by Wheeler B. Horner, Jr., of Pittsburgh, Arthur J. Kingsbury and M. M. Hrouss, both of Denver, Colo., and Jas. M. Satterfield of Dover, Del.; organized with Wheeler B. Horner, Jr., as Secy. and offices at 1941 Oliver Bldg., Pittsburgh, Pa.; to manufacture dyestuffs from American materials; in near future to have daily capacity 5 tons; has begun construction plant to manufacture dyes, etc., from cannon coal to be furnished by Kentucky Black Cannon Coal Co.; Solomon C. Whitbeck, 52 Broadway, New York, represents Pearsite Co. in that city; company's method of manufacturing dyes is reported as consisting of a simplified process for treating coal tar. (Lately noted to establish plant.)

Ky., Louisville.—Commonwealth Manufacturing Co., capital \$300,000, inctpd. by Clarence F. Ott, Alfred W. Ott and Thomas M. Gilmore, Jr.

Ky., Louisville.—Livering Manufacturing Co., capital \$1000, inctpd. by K. B. Lanier, Annie Livering and Flora J. Barrett.

Ky., Paducah.—Bed Springs and Mattresses.—Paducah Bed Springs & Mattress Co., capital \$10,000, inctpd. by V. G. Garner, Nannie Garner and L. G. Garner.

Md., Baltimore.—Vinegar.—U. S. Industrial Alcohol Co., 27 William St., New York, let contract to Geo. A. Fuller Co., 111 Broadway, New York, to erect vinegar factory on Stonehouse Cove, Curtis Bay; 9 buildings, 4 of which are 1 story; 325x188 ft. each; hollow tile mill construction; cement floor; clay roof; plans for other 5 buildings not completed; cost of project about \$1,000,000; Starrett & Van Vleck, Archts., 8 W. 40th St., New York.

Miss., Brookhaven.—Creamery.—Dixie Creamery Co. will establish creamery; also proposes to manufacture mixed feed for cattle and stock.

Mo., St. Louis.—Monuments, etc.—St. Louis Crystal Monument & Art Stone Co., capital \$15,000, inctpd. by Andrew Phillips, John G. Mittler, Chas. L. Fridrich and others.

Mo., St. Louis.—Feathers.—Missouri Feather Mfg. Co. leased 7500 sq. ft. additional floor space for feather factory.

Mo., St. Louis.—Chemicals.—Monsanto Chemical Works will erect 1-story factory at 1811-1821 DeKalb St.; cost \$6500; owner will erect.

Mo., St. Louis.—Skirts.—Sachs Manufacturing Co., capital \$15,000, inctpd. by Guy S. Sachs, Robt. Burnett and Israel Laban.

Mo., St. Louis.—Life-saving Appliances.—Railway Life Saving Appliance Co., capital \$550,000, inctpd. by J. C. Crouch, C. H. Cook, E. Pierce and others.

N. C., Bottling.—Christo Mfg. Co., capital \$10,000, organized with L. W. Jones, Pres.; O. J. White, V. P.; W. A. Barbee, Secy.-Treas.; subsidiary of Christo Mfg. Co. of Richmond, Va.

Okl., Ardmore.—Bottles.—B. R. C. Bottle Co. of Shreveport, La., is reported as contemplating erection of plant.

Okl., Checotah.—Glass Bottles.—Checotah Glass Mfg. Co. inctpd. by J. E. Bahnsen and Harry H. Howard, both of Eaton, Ind.; will establish plant to manufacture glass bottles.

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Okla., Tulsa—Lightning Arrester.—Old Tank Lightning Arrester Co., capital \$25,000, inceptd. by Geo. W. Van Horn, John C. Skillman and Clinton L. Goodale to manufacture device to protect oil tanks from lightning.

S. C., Columbia—Cloth Bags.—Pierre Maryczk interested in plan to establish clothing factory. (See Machinery Wanted—Bag Machinery.)

Tenn., Johnson City—Creamery.—H. W. Johnson is reported as promoting establishment of creamery.

Tenn., Memphis—Lifting Jack.—American Auto Jack Co., capital \$10,000, inceptd. by J. E. Richards, Harry W. Watson, P. H. Pierce and others.

Tex., Dallas—Water Heaters.—Rund Humphrey Water Heater Co., capital \$10,000, inceptd. by F. A. Lemke, R. A. Hardie and J. W. Barber.

Tex., Henrietta—Window Glass.—Edgar Berry of Okmulgee, Okla., will build 36-blower window-glass factory.

Tex., San Benito—Creamery.—Creamery Dairy Co. of San Antonio, Tex., let contract to Nystrom Bros. to construct branch creamery; cost \$10,000; L. C. Whitman to be local manager.

Va., Clifton Forge—Bottling.—Clifton Forge Christo-Cola Bottling Works, capital \$10,000, inceptd.; W. S. Bowles, Prest., Rustburg, Va.; C. E. Busey, V.-P.; Edward Moon, Secy., both of Lynchburg, Va.

Va., Newport News—Bottling.—Newport News Bottling & Lemon-Kola Co. inceptd.; J. C. Hebditch, Prest.; John W. Kellum, Secy.-Treas.

Va., Norfolk—Screens, etc.—Sempell-Pennill Co. of Petersburg, Va., is reported to install machinery, at 511 Plume St., to manufacture picture screens and curtains and paint.

Va., Norfolk—Gloves.—Virginia Glove Mfg. Co., capital \$15,000, inceptd.; C. E. Reick, Prest.; W. V. Martin, Gen. Mgr. and Treas.; J. W. Finch, Secy.

Va., Richmond—Gloves and Rag Dolls.—Virginia Glove Manufacturing Co. will install equipment to manufacture rag dolls; initial daily capacity about 300 dolls; after installation of doll factory, plans to double capacity of glove plant.

Va., Sandy Hook—Tanning Extracts.—John H. Heald & Co. will erect boiler-room in addition to rebuilding burned portion of plant; boiler-room to cost \$8000 and be equipped with 4 additional boilers. (Lately noted to rebuild burned section of plant.)

Va., Staunton—Sassafras Oil.—R. B. Lambert proposes to install equipment for manufacturing sassafras oil. (See Machinery Wanted—Oil (Sassafras) Machinery.)

MOTORS AND GARAGES

Ala., Birmingham—Garage.—A. A. Adams will build garage; 1 story; brick; cost \$3300.

Ga., Atlanta—Garage.—A. C. Langston, Columbia, Tenn., has not decided as to when he will build lately-reported reinforced concrete garage; has let grading contract.

La., New Orleans—Automobiles.—Mohawk Motor Corp., capital \$100,000, J. Bart Davis, 1109 Ibernia Bank Bldg., Prest., will establish factory for manufacture of automobiles; purchased site (20 acres square) and expects to begin erection of first unit within 30 or 60 days; estimated cost of factory, railroad facilities, etc., \$200,000; New Orleans directors include John Merkl, W. A. Francis and J. Bart Davis.

N. C., Greensboro—Garage.—W. C. Boren will erect garage to be occupied by Greensboro Motor Car Co.; structure will be 60x200 ft.; 2 stories at front; basement 50x60 ft. in rear for machine and repair shop; reinforced concrete with exterior of terra-cotta blocks; fireproof; 16,000 sq. ft. floor space; separate room for vulcanizing plant; steam heat; cost \$15,000; has let contract for foundation work.

Okla., Okmulgee—Garage, etc.—James Currier will build \$35,000 garage and office building; 2 stories; 100x100 ft.; common and matt-faced brick; Carthage stone; concrete; vitrified floor tiling; tar and gravel roofing; plate-glass and prism florentine glass; gas and electric fixtures; steam heat; dumb-waiter; freight elevator; plans by Bert C. Overton, Okmulgee. (See Machinery Wanted—Building Materials, etc.)

Okla., Thomas—Garage.—Robinson & McKellogg contemplate building garage; 50x120 ft.; reinforced concrete walls; brick front; cost \$3000.

Tenn., Nashville—Automobiles.—East Nashville Auto Co., capital \$10,000, inceptd. by Chas. R. Manes, W. K. Patterson, W. H. White and others.

Tex., Austin—Garage.—B. W. Randolph will build garage and repair shop.

Tex., Beaumont—Garage.—John I. Keith has contract to erect garage for Ford Motor Car Co.; structure to be of brick, costing \$10,000.

Tex., Temple—Garage.—J. B. Conlisk and James Rudd let contracts to erect 2 business blocks; fireproof; 1 story; concrete; 90x110 ft.; cost about \$18,000; will be occupied by Webb-Clements Auto Supply Co. of San Angelo, Tex., for garage and auto supply house. (Lately noted.)

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

S. C., Spartanburg—Southern Ry. Co. let contract to construct additional terminal facilities. (See Railway Stations, Sheds, etc.—Contracts Awarded.)

ROAD AND STREET WORK

Ark., Lake Village—City will construct concrete or brick paving; ask bids until Sept. 25 on paving materials; J. B. McCrary Co., Consult. Engr., Atlanta, Ga., and Little Rock, Ark. (See Machinery Wanted—Paving—Concrete or Brick—Materials.)

Fla., Bartow—Polk County Comms. contemplate ordering election to vote on \$1,000,000 bonds to construct 208 ml. of roads, to be 15 and 9 ft. wide; will decide at October meeting. (Noted in July.)

Fla., DeLand—Volusia county, New Smyrna Dist., votes on Oct. 12 on \$250,000 bonds to construct roads. Address County Comms. (Noted in August.)

Fla., Mayo—Lafayette county engaged J. B. McCrary Co. (main office Atlanta, Ga.) to prepare plans and supervise construction of roads to cost \$300,000.

Fla., Miami—Dade county will vote about Oct. 16 on \$275,000 bonds to construct Dade county's portion of Tamiami Trail to Lee county line and road up Miami Canal to Broward county line. (Address County Comms. (Lately noted.)

Fla., Palatka—Putnam county, Bostwick Dist., contemplates \$25,000 bonds for road construction; Henry Hutchinson, Clerk Circuit Court.

Fla., Perry—Taylor county engaged J. B. McCrary Co. (main office Atlanta, Ga.), R. L. West, Local V.-P., St. Petersburg, Fla., to prepare plans and supervise construction of \$500,000 worth of hard-surface roads in Taylor county.

Fla., Sanford—Seminole county, L. P. Hagan, Chrmn. Comms., voted \$250,000 to construct 35 ml. brick, shell and sand-clay roads; engineer not selected. (Lately noted.)

Fla., Tallahassee—City let contract Southern Paving Construction Co., Chattanooga, Tenn., at \$67,463.96 to pave Adams and all cross streets between Adams and Monroe St.; brick with grout filler; Dr. C. M. Ausley, Chrmn. Street Com.; Isham Randolph & Co., Consult. Engrs., Jacksonville, Fla., and Chicago, Ill. (Call for bids lately noted.)

Fla., West Palm Beach—Palm Beach County Comms., F. E. Encell, Chrmn., will construct 100 ml. road; rock foundation, penetration system; \$784,590 available; C. H. Ruggles, Engr., West Palm Beach. (Bids lately noted to be received until Sept. 7.)

Ky., Albany—Clinton County Comms. will use lately-noted \$50,000 bonds to construct road, which will be portion of Dixie Short Route, from Tampa, Fla., via Chattanooga to Cincinnati, O.; survey of Clinton county road now being made by F. S. Parrigin, Engr., Albany; contract will be let about Oct. 15; C. B. Parrigin, County Judge.

Ky., Bardwell—Carlisle County Fiscal Court will soon let contract to construct 6 ml. of Bardwell-Mayfield Rd.; ultimate route Bardwell to Mayfield via Milburn, about 30 ml. of road 20 ft. wide; roadway of dirt, to be graveled later; 36,107 cu. yds. excavation; 36,457 cu. yds. embankment; 25-ft., 15-ft. and 20-ft. steel-concrete spans; I-beams encased in concrete; 21 pipe culverts, 12 in., 18 in. and 24 in.; 6 concrete culverts, comprising 46.9 cu. yds. reinforced concrete; estimated cost \$10,821; E. C. Walker, Jr., Engr., Clinton, Ky. (Noted in August.)

Ky., Brownsville—Edmonson County Fiscal Court let contract A. A. Smith of Mt. Pleasant, Tenn., at \$14,000 to construct 3½ ml. of turnpike from Brownsville to Rhoda.

Ky., Columbia—Adair county voted \$120,000 bonds for road construction. Address County Comms. (Lately noted.)

Ky., Elizabethtown—Hardin County Fiscal Court let contract S. P. Johnson to con-

struct 4 ml. of Dixie Highway from Elizabethtown to Hart county line.

Ky., Hopkinsville—Christian County Fiscal Court let contract D. C. McQuarry at \$24,611.64 to construct 6 ml. of road; width 12 ft.

Ky., Louisville—City will pave Chestnut St. from 24th to 26th St. with vitrified brick; estimated cost \$5700; by city force, under supervision of David R. Lyman, City Engr.

Ky., Princeton—Caldwell County Comms. invite bids until Sept. 27 to construct 2 ml. of macadam State-aid highway; 12,300 cu. yds. excavation, 2738 cu. yds. crushed stone and 195 cu. yds. concrete.

La., New Orleans—Speedway Park Assn., David F. Reid, Prest., Chicago, is reported to have acquired 300 acres land in Jefferson parish and to improve for automobile speedway; circular board course 2 ml. long, varying in width from 60 to 80 ft.; total investment, \$500,000.

Ky., Vanceburg—Lewis County Comms. let contract W. T. Cooper & Co. at \$25,121 to grade and shape river road.

La., Gueydan—City let contract C. L. Baker at about \$7000 to lay concrete sidewalks; walks on Main St. to be 10 ft. wide.

La., Lake Charles—Calcasieu Parish Police Jury let contract Texas Grading Co. at \$16,882 to grade highway south of Vinton, 6 ml.; W. M. McCorquodale of Lake Charles at \$14,200 for similar work on road south of Sulphur; these are last contracts for work included in \$1,200,000 road and bridge fund.

La., Ponchatoula—Tangipahoa Parish Police Jury appropriated \$12,000 to improve Ponchatoula-Madisonville Rd.

Md., Baltimore—Dr. Walter F. Wickes let contract to Thos. Strouse, 15 E. Fayette St., Baltimore, to construct concrete driveway on dwelling grounds in Green Spring Valley; cost \$14,000.

Md., Baltimore—P. Flanagan & Sons, 129 E. Lexington St., are lowest bidders for paving included in contract No. 142—Rosedale St. from Edmondson Ave. to Arunah Ave., and Arunah Ave. from Rosedale to Longwood St.; about 2700 sq. yds.; sheet asphalt on 6-in. concrete base. (Call for bids lately noted.)

Md., Baltimore—City will grade, curb and pave with sheet asphalt, under contract No. 143, The Alameda from Harford Rd. to 110 ft. north of 28th St.; \$500 sq. yds.; bids until Sept. 22; John L. Sanford, Acting Prest. Comms. for Opening Streets, City Hall. (See Machinery Wanted—Paving.)

Md., Baltimore—State Roads Com., 601 Garrett Bldg., invites bids until Sept. 28 for following: Contract No. Wo-11, Worcester county—Concrete roadway from near Stockton toward Goodwill, 1.21 mi.; contract No. Cl-13, Br. Carroll county—Reinforced concrete bridge (16-ft. span), girder construction, over Meadow Creek along Meadow Branch turnpike, west of Westminster; contract No. F-23, Frederick county—Repointing walls and coping Jug Bridge over Monocacy River along State Rd. east of Frederick; O. E. Weller, Chrmn. Com. (See Machinery Wanted—Road Construction, etc.)

Md., Baltimore—City will grade, curb and pave following streets with sheet asphalt or bituminous macadam, with combination concrete curb and gutter or reinforced concrete paving, under contract No. 144: Elliott Drive from Frederick to Franklin Rd.; Upper Drive from Edmondson Ave. to Elliott Drive; will require 18,800 sq. yds. sheet asphalt, 18,800 sq. yds. bituminous macadam, 24,000 sq. yds. reinforced concrete paving; bids until Sept. 22; John L. Sanford, Acting Prest. Comms. Opening Streets, City Hall. (See Machinery Wanted—Paving.)

Miss., Columbus—Lowndes County Commissioners, Fourth Dist., will expend \$100,000 to construct about 20 ml. macadam roads; engineer not selected; H. S. Potts, W. A. Ledbetter and W. E. Cox, Comms.

Miss., Meridian—City will construct 1800 sq. ft. concrete sidewalks; bids until Oct. 5; N. M. Crawford, Street Commr.; Hugh Taylor, Clerk, Mayor and Board of Aldermen. (See Machinery Wanted—Paving.)

Miss., Meridian—City will pave sections of 8th St., 26th Ave., 5th St. and Pacific St.; R. L. Blanks, City Clerk and Treas., receives bids until Sept. 20; J. C. Watts, City Engr. (See Machinery Wanted—Paving.)

Miss., West Point—Clay County Suprs. issued \$20,000 bonds to construct roads.

Mo., Caruthersville—City is considering paving of portions of 3d St. and Walker Ave. with bitulithic compound. Address The Mayor.

Mo., Jefferson City.—Cole county votes Oct. 19 on \$100,000 bonds for road improvements. Address County Comms.

Mo., Kansas City.—Board of Public Works will pave McGee St. from 15th to 20th St. with creosoted wood blocks.

Mo., Lebanon.—City and Laclede county, Isaiah Brown, Box 34, official in charge, will expend about \$30,000 during 1916 on rock and gravel roads; now paving 1 ml. street with rock and gravel; Spiller & Roberts, Contrs. on present street work; no contracts pending; Robert Blickenderfer, Engr. (See Machinery Wanted—Road Machinery.)

Mo., St. Louis.—City let contract G. A. Heman at \$82,000 to pave Florissant Ave. in front of Bellefontaine and Calvary cemeteries with asphalt.

N. C., Greensboro.—City will pave W. Lee and Tate Sts. with concrete; Edw. W. Myers, City Engr.

N. C., Greenville.—Pitt county, Falkland township, votes Sept. 21 on \$50,000 bonds to construct roads; S. A. Congleton, Chrmn. County Comms.

N. C., Greensboro.—Guilford County Commissioners will construct 2 ml. of macadam road from Greensboro and High Point ends; estimated cost \$25,000.

N. C., Reidsville.—City will pave Main St. and extend sidewalks. Address The Mayor.

N. C., Rutherfordton.—City will pave section of Main St.; estimated cost \$5800.

N. C., Shelby.—Cleveland county, No. 3 township, votes Oct. 16 on \$30,000 bonds to construct roads. Address County Comms.

N. C., Walnut Cove.—City let contract Geo. R. Martin of Salisbury to lay cement sidewalks on both sides of Main from 1st to 5th St. (Call for bids lately noted.)

N. C., Walnut Cove.—City let contract Geo. R. Martin of Salisbury to lay 3000 sq. yds. cement sidewalks on both sides of Main St. from 1st to 5th St. (Call for bids lately noted.)

N. C., Wilson.—City engaged Anderson & Offutt of Charlotte, N. C., as engineers for street improvements, etc.; \$80,000 bonds lately noted voted; Theo. A. Hinnant, Town Clerk. (See Water-works.)

N. C., Winston-Salem.—Forsyth County Highway Com. will build road from Dennis to Fulp, about 2 ml.; convict labor.

Okla., Tulsa.—Tulsa county will vote on \$20,000 bonds to construct roads. Address County Comms.

S. C., Gaffney.—City, W. H. Ross, Clerk, will construct about 3750 sq. yds. sheet asphalt, vitrified brick or cement-concrete paving, 8 catch-basins complete, 575 ft. 12-in. storm sewer complete, 325 ft. 8-in. and 18-in. concrete curb and 650 cu. yds. grading; bids until Sept. 22. (See Machinery Wanted—Paving.)

S. C., Sumter.—City, D. M. Blanding, Clerk and Treas., voted lately-noted \$225,000 bonds for street improvements.

Tenn., Livingston.—Overton county contemplates another election to be held about Oct. 23 to vote on bonds for road construction. Address County Comms. (Bond issue of \$160,000 lately noted defeated.)

Tenn., Memphis.—City Comms. let contract to Koehler Bros.-Fowler Construction Co., Memphis, at \$22,204.14 to pave Main St. from Linden to Calhoun Ave. with wood block; Mike Harvey is lowest bidder at \$436.85 to improve Claybrook St. from Madison to Poplar Ave.

Tenn., Newport.—Coke County Comms. let contract Lee J. Smith Construction Co., Morristown, Tenn., for road construction. (Lately noted.)

Tenn., Park City.—City Council passed ordinance authorizing \$90,000 bond issue to pave Magnolia Ave.; length 10,100 ft.; W. A. Park, Engr., estimates cost at \$86,882.

Tenn., Rutledge.—Grainger county voted \$200,000 bonds to construct roads. Address County Comms.

Tenn., Tazewell.—Claborn county will grade and macadamize 103 ml. of road; County Road Comms., J. H. S. Morison, Chrmn., Cumberland Gap, Tenn., receive bids until Oct. 8. (See Machinery Wanted—Road Construction.)

Tenn., Winchester.—Franklin county votes Sept. 17 on \$250,000 bonds to construct roads. Address County Comms. (Lately noted.)

Tex., Amarillo.—City voted \$50,000 bonds to pave streets. Address The Mayor. (Lately noted.)

Tex., Beaumont.—City will lay about 2 ml. of paving; C. L. Scherer, City Engr.

Tex., Brownsville.—Cameron County Comms., Brownsville, and Willacy County

Comms., Sarita, Tex., plan construction of road across 25 mi. of sand.

Tex., Canton.—Van Zandt county contracts have been let as follows: To Smith & LaRoe of Palestine, Tex., and Crockett, Tex., for construction main highway; Meeks & Davidson, Grand Saline, to build roads in various precincts; \$160,000 available.

Tex., Corsicana.—City votes Oct. 10 on \$80,000 bonds to improve streets. Address The Mayor.

Tex., El Paso.—City will pave St. Vrain St. from San Antonio to 4th St.; City Engr. will prepare plans and estimates of cost.

Tex., El Paso.—El Paso county votes Oct. 12 on \$300,000 bonds to construct roads. Address County Comms. (Lately noted defeating \$750,000 bonds.)

Tex., El Paso.—Jas. G. McNary and others let contract Texas Bitulithic Co. of Dallas at about \$45,000 to pave streets in proposed residential suburb. (See Land Development.)

Tex., Orange.—Orange county, Fourth Precinct, votes Oct. 16 on \$7000 bonds to shell or gravel portion of lower Beaumont Rd. Address County Comms.

Tex., Paris.—City will pave Grand Ave., entire length, and 15th St. from Bonham to Kaufman. Address The Mayor.

Tex., Tahoka.—Lynn county will vote Sept. 18 on \$25,000 bonds for road construction. Address County Comms.

Tex., Wichita Falls.—City will pave 2 mi. of streets. Address The Mayor.

Va., Eastville.—Northampton county, Eastville Dist., Road Board's plans for construction of 55 mi. road will not be ready by Sept. 15, and letting of contract will be delayed; W. L. Dalby, Secy. of Board; lately noted to receive bids until Sept. 27. (See Machinery Wanted—Road Construction.)

Va., Pulaski.—City will construct granite sidewalks. Address The Mayor.

W. Va., Berkeley Springs.—City, J. A. Risinger, Mayor, voted \$15,000 bonds for street paving.

W. Va., Charleston.—City Council let contracts aggregating \$73,598.61 for paving as follows: R. M. Hudson & Co. of Atlanta, Ga., for asphaltic concrete paving; Glover & Kimberlin of Charleston, 2 contracts for standard block brick paving; Cummings Cement Co. of Charleston, 2-course concrete paving; Carey-Reed Co. of Lexington, Ky., asphaltic concrete paving; Federal Asphalt Co. of Hamilton, O., 7 contracts for asphaltic concrete paving; total of about 34,000 sq. yds.; B. A. Wise, City Mgr. (Call for bids lately noted.)

W. Va., Logan.—Logan county defeated previously-noted \$200,000 bonds for road construction; Bruce McDonald, Prest. Logan County Court.

W. Va., Martinsburg.—City voted \$15,000 bonds to pave main street; John A. Rosinger, Mayor.

W. Va., Moundsville.—City let contract R. J. McFadden to pave 5th St. from Jefferson to Grant Ave.

W. Va., Wheeling.—Ohio County Comms. let contract Ball Engineering Co. to resurface with asphalt National pike from Stockyard to Rudlers and from Leatherwood to Pleasant Valley; also pave with asphalt road from Dean's Shop to Clinton.

SEWER CONSTRUCTION

Ala., Birmingham.—City will construct sanitary sewers under Improvement Ordinance 879-C; bids until Sept. 14; Julian Kendrick, City Engr. (See Machinery Wanted—Sewer Construction.)

Ark., Lake Village.—City is asking bids until Sept. 25 on sewer construction materials, including 126 tons concrete stone, 180 bbls. cement, 2400 lbs. reinforcing steel, 23,350 ft. terra-cotta pipe, 42,000 hard brick, sand, etc.; J. B. McCrary Co., Engr., Atlanta, Ga., and Little Rock, Ark. (See Machinery Wanted—Sewer Construction.)

Ky., Lexington.—City engaged P. H. Norcross, Engr., Atlanta, Ga., to prepare plans for sewage disposal plant. J. Ernest Cassidy, Mayor. (City lately noted to vote in Nov. on \$350,000 bonds for sewer construction.)

La., Bogalusa.—Public Utilities Committee accepted report of G. U. Borde of New Orleans relative to constructing sewer system, water-works and electric-light plant; citizens will meet in October to consider \$200,000 bond issue for sewer system, etc.)

La., Hammond.—City let contract J. R. Sutherland & Co. of Kansas City, Mo., at \$23,000 to construct sewer system; city will furnish pipe to cost about \$14,000; Xavier

A. Kramer, Consult. Engr., Magnolia, Miss. (Call for bids lately noted.)

Md., Baltimore.—City will construct sanitary lateral sewers in Dist. 46-B, section No. 4 of Jones Falls interceptor and section No. 2 of Dist. 46 trunk sewer; contracts Nos. 159, 160 and 161; contract No. 159 requires 36,000 lin. ft. 8 to 15-in. terra-cotta pipe sewer and 17,500 lin. ft. house connections; contract No. 160, 5800 cu. yds. earth excavation, 4600 cu. yds. rock excavation and 7000 lin. ft. 18 to 27-in. sewer; contract No. 161, 6000 cu. yds. excavation in trench; 1500 lin. ft. excavation in trench or tunnel and 4600 lin. ft. 18 to 33-in. sewer; bids until Sept. 22; Chas. England, Chrmn. Sewerage Com. (See Machinery Wanted—Sewer Construction.)

Okla., Sand Springs.—City let contract Connelly Construction Co., El Reno, at \$5025 to construct 1½ mi. of storm sewers.

Okla., Weleetka.—City voted \$37,000 bonds to construct sanitary sewer system. Address The Mayor.

S. C., Columbia.—City votes Oct. 5 on \$200,000 bonds for sewer construction; L. A. Griffith, Mayor. (Lately noted.)

Tex., Arlington.—City voted Sept. 14 on \$10,000 bonds to extend sewer system. Address The Mayor.

Tex., Beaumont.—City will construct about 18,000 lin. ft. of sewers; C. L. Scherer, City Engr.

Tex., Corsicana.—City votes Oct. 10 on \$20,000 bonds for sewer improvements. Address The Mayor.

Tex., Henderson.—City granted franchise to J. M. Wood, Oberlin, O., to construct and operate sewer system; installation to be commenced within 3 months.

Va., Richmond.—Administrative Board let contract Leroy E. Newton at \$11,601.35 to construct sewer in W. Leigh St., Scott's Addition. (Administrative Board lately noted as planning to provide \$45,000 for completing construction of sewer system in Scott's Addition.)

Va., Richmond.—Administrative Board let contract Leroy Newton to construct sewer in W. Leigh St. between McTavish St. and Boulevard in Scott's Addition.

Va., Richmond.—Administrative Board will consider construction of sewers, in East End, to cost \$50,000; Chas. E. Bolling, City Engr.

W. Va., Huntington.—City let contract Amos Trainor at \$6500 to construct sewer system in First and Second Wards.

TELEPHONE SYSTEMS

Ky., Science Hill.—Science Hill Farmers' Telephone Exchange Co., capital \$2000, incorporated by John E. Dickerson, W. H. Lyon, E. W. Ratliff, L. D. Stringer and Alex. Stroud.

Tenn., Memphis.—Illinois Central R. R., A. S. Baldwin, Ch. Engr., Chicago, plans construction of telephone system from Grand Central Station to south yard shops and to Nonconah; cable to contain 75 lines for southside shops and 40 for Nonconah; each yard office at Nonconah and each mechanical department office to have individual line; all lines to connect with Illinois Central switchboard in Central Station; construction to be under supervision of B. Weeks, Supt. of Telegraph; estimated cost \$18,000.

Tenn., Speedwell.—Speedwell Telephone & Telegraph Co., capital \$1000, Incptd. by Wm. Russell, Wm. Ausmus, A. G. Beeler and others.

Tex., Isabel.—Jas. McCoy, Brownsville, Tex., is lowest bidder at \$9500 on Item 1 calling for complete construction of radio station building at naval radio station.

Tex., Waco.—Texas Telephone Co. will build exchange; 55x120 ft.; 3 stories; basement under entire structure; to contain work and repair shop, storage-rooms for equipment, dynamos and other electrical machinery, heating plant, etc.; concrete fireproof construction; exterior of front and probably one side of building of tapestry brick; roof garden for operators; purchased switchboard costing \$60,000; cost of building, \$80,000. (Noted in Oct.)

TEXTILE MILLS

Ala., Florence.—Sheeting—Ashcraft Cotton Mills will add 160 automatic looms; has contracted for this machinery; completed necessary extension to building. (Lately noted to add machinery, etc.)

Ga., Hogansville.—Cotton Duck.—Hogansville Mills will build 275.6x105.4-ft. 2-story extension; remove machine shop and cotton

storehouses from opposite end and build 4-story 100x105.4-ft. storehouse, with elevator and stairway; at end of storehouse build 2-story warehouse 42 ft. square; all of slow-burning mill construction; let contract to Fiske-Carter Construction Co., Greenville, S. C., and Worcester, Mass.; Lockwood, Greene & Co., Archts.-Engrs., 60 Federal St., Boston, Mass., and 1530 Heley Bldg., Atlanta, Ga.; contemplates building 30 double houses for operatives; machinery for addition will include about 5000 spindles and 115 cards; all electric driven. (Lately briefly noted.)

Ga., Newnan.—Cotton Yarn.—Newnan Cotton Mills awarded contract for construction opener-room; 2½-story 60x60-ft. brick building with tar and gravel roof, costing \$10,000; J. E. Sirrine, Archt.-Engr., Greenville, S. C. (Lately mentioned as waste mill.)

N. C., Charlotte.—Hosiery.—Defiance Sock Mills, Morehead Jones, Mgr., let contract R. L. Goode, Charlotte, to erect 2-story 80x40-ft. standard mill construction building costing \$6000; will install 3000 spindles, 6 ribbers, 5 loopers, press dryers for finishing, etc.; weekly production, 900 doz. prs. split-foot hose. (Lately mentioned.)

N. C., Concord.—Knitting Yarn.—Norcott Mills Co., W. G. Broadfoot, Secy., is having plans prepared for construction of 2 and 3-story building; will install 12,000 spindles and accompanying machinery to manufacture double-carded knitting yarns; has purchased equipment. (Lately reported organized with \$250,000 capital, etc.)

N. C., Edenton.—Cotton Goods.—Edenton Cotton Mills engaged C. R. Makepeace & Co., Providence, R. I., as Archts.-Engrs. for mill addition; 1 story 80x72 ft.; 2 stories 80x56 ft.; 2 stories 101x52 ft.; mill construction; will install 8000 spindles, etc.; electric drive; generate electricity by steam power. (Lately noted to build addition.)

N. C., Granite Falls.—Cotton Yarn.—Granite Falls Mfg. Co., Granite Falls and Hickory, will change present equipment to electric power throughout. (See Water-power Developments.)

N. C., Kings Mountain.—Cotton Yarn.—Pauline Mill, C. E. Neisler, Propr., progressing with construction of 2-story brick building for additional mill; will install 2000 spindles to spin yarn supplying the mill's cotton damask looms; has purchased the new spinning machinery. (C. E. Neisler lately noted to build 2000-spindle mill, etc.)

S. C., Enoree.—Cotton Cloth.—Melville Mfg. Co., capital stock \$500,000, organized; Allen J. Graham, Prest.; Hamlin Beattie, Treas.; Alex. MacBeth, Secy.; each of Greenville, S. C.; will operate 36,000 spindles, 896 looms, etc. (Lately noted Incptd. and acquired Enoree Mfg. Co., etc.)

Tenn., Murfreesboro.—Knit Underwear.—Chas. C. Groat (care Board of Trade), W. C. Bilbro, T. H. Harrison and others will organize \$100,000 company; construct 3-story brick building with sprinkler system; install machinery for daily capacity 300 doz. suits underwear; has equipment.

Tenn., Shelbyville.—Cotton Duck, etc.—Sylvan Cotton Mills contemplates adding about 3000 spindles, 150 looms, necessary preparatory machinery, etc. (See Machinery Wanted—Cotton Machinery.)

Tex., Post.—Sheeting, etc.—Postex Cotton Mills will add 72 cylinder looms for weaving pillow casing and 32 broad looms for weaving ten-quarter sheeting; has purchased this equipment.

WATER-POWER DEVELOPMENTS

N. C., Burnsville.—Yancey Light & Power Co., organized; Chas. W. Harper, Engr.; will construct lately-noted hydro-electric plant; cost \$16,000; develop 100 H. P. at present, ultimately 200 H. P.; 3 mi. transmission at cost of \$350 per mi.; work, excepting dam, to be done under supervision of engineer; dam of wood and concrete, 27 ft. high, 150 ft. long, cost about \$5000; lately incorrectly noted under "Burnside." (See Machinery Wanted—Electrical Equipment, etc.)

N. C., Granite Falls.—Granite Falls Mfg. Co., Granite Falls and Hickory, N. C., will build 45-ft. dam and change present equipment to electric power throughout cotton mill; estimated cost \$40,000; plans and specifications by Tucker & Laxton, Engrs., Charlotte, N. C.; company will soon invite bids. (See Machinery Wanted—Dam Construction, etc.)

WATER-WORKS

Ark., Benton.—Comms. Water-works and Sewerage Improvements, Dist. No. 1, will install machinery for previously-noted water

system; bids until Sept. 28; includes two 100 H. P. boilers, 200 H. P. heater, feed pump, two 500 G. P. M. steam pumps, three 300-gal. centrifugal pumps, 90 H. P. engine, 60 K. V. A. generator, etc.; J. B. McCrary Co., Engr., Atlanta, Ga., and Little Rock, Ark. (See Machinery Wanted—Water-works Machinery.)

Ga., Coolidge.—City engaged W. Hopson Goodloe, American National Bank Bldg., Macon, Ga., to prepare plans and specifications and supervise water-works construction. (Previously noted.)

Ga., Covington.—City contemplates installing water-filter coagulation basin to cost \$2000; F. T. Harrison, Supt.

Ga., Macon.—Water Comms. invite bids until Sept. 18 to build filter-house at Riverside Station; estimated cost \$11,000, divided as follows: Building, \$4300; filters, \$4000; concrete, \$1000; plans furnished on request at Water Office. (Lately noted.)

Ga., Madison.—City, G. W. Hubbard, Supt. Electric-light and Water Plant, will build coagulating basin. (See Machinery Wanted—Lumber; Valves and Pipefittings.)

Ky., Elizabethtown.—City contemplates voting on bonds to build filter; cost \$7000 to \$10,000; R. B. Park, Mayor.

La., Bogalusa.—Public Utilities Committee adopted resolution accepting report of G. U. Borde of New Orleans relative to constructing water-works, sewer system and electric-light plant; citizens will meet in Oct. to consider \$200,000 bond issue. (Lately noted as contemplating \$200,000 bond issue for water-works, etc.)

La., Lockport.—Village Council adopted resolution providing for construction of water-works; appropriated \$1200 as nucleus for fund. Address The Mayor.

La., Oakdale.—City, R. E. L. Ricketts, Secy. of Committee, will expend \$20,000 to \$30,000 on lately-noted water-works installation; two 750-gal. underwriters' pumps, driven by 80 H. P. fuel-oil engine; 100,000-gal. concrete reservoir; 100,000-gal. tank, elevated 100 ft.; 12,000 ft. 4, 6 and 8-in. mains; 23 2-way standard hydrants, valves, etc.; no bids.

Mo., St. Joseph.—St. Joseph Water Co. is reported as having contracted to extend water-works.

Mo., Washington.—City, P. F. Feitz, Mayor, voted previously-noted \$50,000 bonds for water-works; will issue \$53,000 to purchase and improve plant.

N. C., Lumberton.—City will improve water-works; install 2 concrete tub filters, brick house, concrete coagulating basin, all pipes and filter equipment, and centrifugal pumps; bids until Oct. 12; Engr., Gilbert C. White, Charlotte, N. C.; lately noted. (See Machinery Wanted—Water-works and Electric Light System.)

N. C., Wilson.—City engaged Anderson & Christie of Charlotte as engineers for \$50,000 water-works, \$240,000 street improvements and \$75,000 gas plant; total, \$465,000; water-works to include pumping station with one or more auxiliary stations, filtering plant, reservoir and distribution system; Theo. A. Hinnant, Town Clerk. (Bond issue of \$85,000 lately noted voted for water-works.)

Okla., Marshall.—City is reported to invite bids about Sept. 15 to construct water-works; estimated cost \$25,000; Benham Engineering Co., Engr., Oklahoma City, Okla. (Lately noted to have voted \$20,000 bonds, etc.)

Okla., Pauls Valley.—City will drill and equip well system to supply 250,000 gals. water daily; bids until Sept. 20; L. W. Wettermark, City Clerk; lately noted to vote on \$16,000 bonds to extend water system. (See Machinery Wanted—Well Drilling.)

S. C., Columbia.—City votes Oct. 5 on \$300,000 bonds for water-works; L. A. Griffith, Mayor. (Previously noted.)

S. C., Spartanburg.—City Comms. authorized \$25,000 expenditure to improve pumping station; will install 2 additional filters of 3,000,000-gals. capacity and enlarge coagulating basin; work is progressing on erection of concrete dam at Shoaley Creek to replace wooden dam, where auxiliary plant is installed.

Tex., Galveston.—City plans to lay permanent water main between Galveston and Alata Loma plant; diam. 30 to 36 in.; to be placed about 35 ft. below surface of bay; cost \$150,000 to \$200,000.

Va., Williamsburg.—City votes Sept. 28 on \$30,000 bonds to construct water-works. Address The Mayor.

WOODWORKING PLANTS

Ark. Marianna.—Staves.—Bott Bros. will build stove mill.

Ga. Douglas.—Excelsior.—W. F. Scoggins will establish plant to include manufacture of excelsior; capacity, 1 car daily. (See Miscellaneous Factories.)

Ky. Louisville.—Boxes and Crates.—American Box & Crate Co. increased capital from \$10,000 to \$30,000.

Mo. St. Louis.—Woodworking.—Missouri Forest Products Co., capital \$16,000, incptd. by L. and A. H. Boller and Fred Billmeyer.

Tenn. Johnson City.—Bent Wheel Rims.—Hess Mfg. Co. increased capital from \$30,000 to \$60,000.

Tenn. Nashville.—Automobile Bodies.—Nashville Automobile Body and Top Works, capital \$100,000, incptd. by J. L. Robins, L. W. Potter, J. G. Record and others.

FIRE DAMAGE

Ark. Texarkana.—J. H. Thomas' residence in North Heights.

Ark. Texarkana.—J. Nolan Norris' plantation home 5 miles north of Texarkana on Summerhill Rd.; loss \$5,000.

Fla. Orlando.—Sellers & Bunch's lumber mill and turpentine still; loss \$50,000.

Fla. Sanford.—Royal Cafe; Hines Block; W. W. Long's store; loss \$10,000.

Fla. Titusville.—C. J. Rogero's residence. Ga. Cordele.—H. C. Weller's warehouse; loss \$10,000.

Ga. Lavonia.—J. A. Tribble's residence.

Ky. Cynthia.—McDaniel & Hatterick's store; M. L. Heintz's bakery; loss \$5,000.

La. Harvey.—Disalvo & Landry's building; loss \$5,000.

Mo. Norrisville.—Morris Davis' residence near Norrisville; loss \$7,000.

Mo. Westminster.—Carroll Transit Co.'s garage.

Miss. Beaumont.—Beaumont Veneering Co.'s plant; loss \$24,000.

Miss. Hattiesburg.—J. C. Williams' residence at 708 2d St.

N. C., Weaverville.—John Maney's saw-mill.

Okla., Hollis.—Commercial Hotel; Louis Mayfield's barber shop; Hollis Confectionery Co.'s building; John Crowder's building; Leader Grocery Co.'s store; loss \$10,000.

Okla., Perry.—Ludwig Johnson's residence on Oteo reservation 6 miles from Perry; loss \$4,000.

Okla., Sapulpa.—E. L. Newport's cleaning establishment; Owl Drug Store; Smoke House; buildings of Dr. Sterrett of McAlester, Okla., and others; total loss \$15,000.

S. C., Darlington.—Dean Bldg.

S. C., Orangeburg.—Orangeburg Lumber Co.'s plant; building was owned by E. R. Pauling; loss on plant, \$2,000; loss on building, \$4,000.

S. C., Winnsboro.—S. T. Clowney's barns, storehouses, etc.

Tenn., Memphis.—Old Shelby county courthouse; loss \$60,000. Address County Comms.

Tenn., Ripley.—Farmers' Union gin and seedhouse at Flippen Station; loss \$6,000.

Tex., Brownwood.—Brownwood Mattress Factory; loss \$15,000.

Tex., Cameron.—James Hooks' residence; loss \$8,000.

Tex., Calvert.—Wm. McIntosh & Son's store; loss \$20,000.

Tex., Houston.—State Game Warden's residence at Caddo Lake, occupied by Deputy Warden Ben Roe.

Tex., Huntsville.—Charles Bell's residence.

Tex., Otto.—Bletsch Warehouse; Daugherty buildings; Will Stockton's building; Dr. Baird's office; Mart Cotton Co.'s office; Otto Gin Co.'s plant; loss \$10,000.

Va., Petersburg.—Newsome Feed & Grain Co.'s building, owned by Atlantic Coast Line R. R., J. E. Willoughby, Ch. Engr., Wilmington, N. C.; loss \$15,000.

W. Va., Powhattan.—Powhattan Coal & Coke Co.'s coal tippie; loss \$35,000 to \$40,000.

W. Va., Shanghai.—Gilbert Kitchen's tenant-house, occupied by G. T. Parsons; loss \$3,000.

WRECKED BY EXPLOSION

Fla., Ybor City, Ind. Sta. Tampa.—Red Lion Saloon, operated by Joe Falsone; loss about \$30,000.

to cost \$35,000; plans by Bert C. Overton, Okmulgee. (See Motors and Garages.)

Okla., Pocomassett.—State Bank has plans by L. P. Larsen, Chickasha, Okla., for bank building; 25x50 ft.; cost about \$5,000; architect will purchase materials, which include round-edge brick, pine millwork, Bedford stone, steel I-beams, granite columns, base marble, iron grates, wire work, tar and gravel roofing, maple flooring, metal ceiling, galvanized-iron cornice, paint, glass, varnish, etc.

Tex., Marshall.—Guaranty State & Savings Bank will remodel building.

Va., Newport News.—Chesapeake & Ohio Ry., F. I. Cabell, Ch. Engr., Richmond, is reported to erect general office building. (See Railway Stations, Sheds, etc.)

W. Va., Wheeling.—American Sheet & Tinplate Co. will erect office and hospital. (See Hospitals.)

CHURCHES

D. C., Washington.—Methodist Episcopal Church, Rev. Dr. F. J. Prettyman in charge, will erect chapel at 16th and Lamont Sts.; cost \$20,000; will erect larger building later.

Fla., Titusville.—School Board has plans by A. E. Lewis, Miami, Fla., for graded and high school provided for in \$100,000 bonds voted on Sept. 14; reinforced concrete frame; either hollow tile or concrete curtain walls; inner partitions gypsum tiles; floors of concrete slabs covered with wood; iron and concrete stairs; roofs of concrete slabs covered with asbestos composition roofing, except roof over gymnasium, which is covered with Spanish tiles and sheathing treated with fire-resisting material; framing for all roofs of steel trusses and reinforced concrete beams; 15 classrooms, 2 laboratories, 4 manual-training rooms, room for heating apparatus, auditorium to seat 700; gymnasium with shower baths, lockers, etc.; drinking fountains, call bells, telephones, electric lights, etc. (Previously noted.)

Fla., Tampa.—Clavers Catholic Church will erect building; hydrostone; cost \$3,000.

Ga., Macon.—Methodist Church organized; will erect temporary building at Cherokee and Pio Nono Aves.; Rev. W. N. Almsworth, Pastor of Mulberry Street Methodist Church, is interested.

Mo., Baltimore.—Trinity Baptist Church, 5 W. 20th St., colored, will erect edifice at 1843 Druid Hill Ave.; site 66x100 ft. Address The Pastor.

Miss. Gulfport.—Rev. Andreas Klelland will erect Norwegian mission to replace structure lately burned; 50x70 ft.; 1 story.

Mo., Kansas City.—Westport Presbyterian Church, Westport and Wyandotte Sts., will erect addition to building; stone; 22 Sunday-school rooms, 2 auditoriums and gymnasium with basketball court; cost about \$20,000. Address The Pastor.

Mo., St. Louis.—St. Anthony the Hermit, Rev. Anthony Slieman, Pastor, will repair building; remove partition on first floor, install new floor, redecorate walls, etc.

N. C., Walnut Cove.—Primitive Baptist Church plans to rebuild structure. Address The Pastor.

Tenn., Kingsport.—Baptist Church will erect building at Sullivan & Boone Sts.; brick and Tennessee marble. Address The Pastor.

Tex., Chillicothe.—R. H. Stuckey, Archt., receives bids until Sept. 25 to erect 2-story brick-vener church building; plans and specifications on application.

Tex., El Paso.—Houston Square Calvary Baptist Church will erect building. Address The Pastor.

Tex., Granger.—Catholic Church will erect \$35,000 building. Address The Pastor.

Tex., San Antonio.—Bethel African Methodist Episcopal Church has plans by Leo M. J. Diemann, San Antonio, for building; 50x115 ft.; reinforced concrete foundation; upper work stucco; cost about \$14,000.

Va., Richmond.—Belmont Christian Church will erect building. Address The Pastor.

Va., Richmond.—Northside Baptist Church, Rev. S. H. Templeman, Pastor, will erect Sunday-school; 18 classrooms; cost about \$10,000.

Va., Wytheville.—Baptist church will erect building; cost \$15,000. Address The Pastor.

CITY AND COUNTY

La., New Orleans.—Offices.—Sewerage and Water Board adopted tentative plans for office building; 6 stories; main entrance on Lafayette St.; wide court beyond entrance leading to elevator lobby and 2 elevators;

engine-room and boilers on ground floor; fireproof vaults; automatic sprinklers; exterior finished in terra-cotta and pressed brick; windows to have steel casements; Toledano, Wogan & Bernard, Archts., New Orleans. (Lately noted.)

Mo., St. Louis.—Zoo.—Board of Public Service opened bids to erect zoo building in Forest Park; 75x50 ft.; 1 story; 25 ft. high; roof of skylight glass; 10 cages; E. O. Hirsch, St. Louis, is lowest bidder at \$11,300; Tom P. Barnett Co., Archt., St. Louis; Clinton H. Fisk, Ch. Eng. Constr., St. Louis. (Lately noted.)

N. C., Asheville.—Home.—City and County Comms. plan to erect rescue home; cost about \$4,000; J. E. Rankin, Mayor.

Okla., Woodward.—Library.—City will erect \$20,000 Carnegie library. Address The Mayor.

S. C., Anderson.—Barn and Stables.—City has plans by W. A. Sanders, Anderson, for barn and stables for 30 mules on E. Market St.; concrete foundation; corrugated iron; iron roof; day labor; cost \$2,500; J. H. Godfrey, Mayor.

Tenn., Maloneyville.—Asylum.—R. A. Brown, County Judge, Knoxville, receives bids until Sept. 18 for material and erecting annex to County Poor Asylum, also laundry, laboratory and bathhouse; 34x35 ft. and 28x40 ft., respectively; one frame with concrete floor; one brick and concrete; asphalt shingle roof; steam heat from central plant; electric light from central plant; cost about \$3,500; also receives bids at same time for painting and plastering County Insane Asylum; plans and specifications at office of A. E. Gredig, Archt., Knoxville.

Tex., Houston.—Warehouse.—City, Ben Campbell, Mayor, will erect additional concrete warehouse on wharf near turning basin.

Tex., Houston.—Warehouse.—City, Ben Campbell, Mayor, will erect fire walls at municipal cotton sheds; E. E. Sands, City Engr.

Va., Richmond.—Engine-house.—Fire Dept. will erect engine-house at Cleveland, West and Kensington Sts.

COURTHOUSES

La., Pointe a la Hache.—Plaquemine Parish will reconstruct courthouse; cost \$50,000; Frank C. Meyers, Sheriff; J. B. Festerling, Prest. of Police Jury.

Tex., Johnson City.—Blanco county, Wm. Martiny, Judge, receives bids until Sept. 30 to erect 2-story stone and concrete courthouse; plans and specifications at office of Henry T. Phelps, Archt., Gunter Bldg., San Antonio, Tex., and Judge Martiny at Johnson City. (Lately noted.)

DWELLINGS

Ala., Attalla.—C. R. Shepherd has plans by Wm. Gooza for dwelling on 5th St.; 8 rooms; frame; ornamental slate shingle roof; wood and tile floor; cost about \$5,000; construction by owner, who will purchase all material. (Lately noted.)

Ala., Birmingham.—R. W. Carlisle will erect frame residence at 17 McMillan Ave., West End; cost \$3,000.

Ala., Birmingham.—Dr. W. W. Ransom will erect residence; 2 stories; brick veneer; plans by Sallie & Mewhinney, Birmingham, ready about Sept. 15.

Ala., Birmingham.—W. J. P. Dunn is having plans prepared by Wm. T. Warren, Birmingham, for residence.

Ark., Batesville.—Samuel M. Casey will erect dwelling in spring; brick veneer; cost about \$5,000. (Lately noted.)

D. C., Washington.—Middaugh & Shannon, 1039 Woodward Bldg., will erect 8 dwellings at 4101-15 Illinois Ave.; 2 stories; brick; cost \$33,000; plans and construction by owners.

D. C., Washington.—Wm. C. McGowan, 1719 Kilbourne Pl. N. W., will erect 4 dwellings at 2214-30 Shannon Pl. S. E.; 2 stories; brick; cost \$9,000.

Fla., Bartow.—E. T. Hollingsworth, Lakeland, Fla., will erect dwelling 5 miles from Bartow; 30x44 ft.; bungalow type; shingle roof; No. 1 cypress finished floor; gasoline light; concrete walk; cost \$2,000. Address Owner. Lately noted under Lakeland. (See Machinery Wanted—Water-works, Isolated, Supplies.)

Fla., Clearwater.—E. J. Servis opens bids about Sept. 20 to erect dwelling in Wildwood addition; 2 stories; 34x36 ft.; frame; prepared roof; cost about \$3,000; Lester Avery, Archt., Clearwater. Address architect. (Lately noted.)

Fla., Jacksonville.—I. D. Wilson will erect 2 frame dwellings on Oak St.; cost \$6,400.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ga., Savannah.—Wm. R. Morrison will erect apartment-house at 108-110 E. Broad St.; also remodel 2 dwellings for apartments.

Mo., Kansas City.—Willard B. Weaver will erect 3 apartment buildings at 43d and Campbell Sts.; cost \$50,000.

Mo., St. Louis.—Henry Flach will erect store and apartment building. (See Stores.)

Mo., St. Louis.—W. H. Mills will erect 3-story tenement-house and 1-story garage at 585 Nina Pl.; cost \$20,500; construction by owner.

Tenn., Morristown.—Sam P. Harris will erect apartment-house on W. Main St.; 2 stories.

Tenn., Nashville.—Chas. Cohn is having plans prepared by Donald Southgate, 56 Arcade, Nashville, for apartment-house at West End and 31st Aves.; 26 suites; brick walls; wood joist floor; cost about \$60,000; plans ready about Oct. 20. (Lately noted.)

W. Va., Huntington.—Mrs. T. W. Dinkins, 509 W. 110th St., New York, is having plans prepared by L. J. Dean, Huntington, for apartment-house; 4 stories and basement; brick; 12 suites; cost \$40,000; owner will purchase materials.

ASSOCIATION AND FRATERNAL

Ark., Blytheville.—Allen Walton will erect store and lodge building. (See Stores.)

Fla., Lake Worth.—Lake Worth Lodge No. 61 I. O. O. F., will probably erect temple.

Mo., Ashbury.—Ashbury Lodge, I. O. O. F., will erect building; brick; 50x60 ft.

Tenn., Morristown.—Masonic Temple Assn. plans to erect building; lower floor for market-house of about 30 stalls; 50x150 ft.; driveway on each side and yard 20x75 ft.; cost \$35,000 to \$30,000; J. F. Smith, Prest.; J. L. Drinnon, Secy.

Va., Hopewell.—E. I. du Pont de Nemours Powder Co. will erect 2 Y. M. C. A. buildings; one within confines of camp, 78x168 ft., other in Hopewell proper, 101x122 ft.

Va., Norfolk.—Company is being organized to erect buildings for lodge hall, etc.; Ferguson, Calrow & Wrenn, Archts., Norfolk. (See Theaters.)

BANK AND OFFICE

Fla., Dade City.—Bank of Dade City is being organized; J. M. Harvey, Prest.; plans to erect 2-story bank and office building; cost about \$6,000.

Fla., Fort Pierce.—East Coast Lumber & Supply Co. will soon let contract to erect \$10,000 office building; pressed brick; stone columns and trimmings; tile roof; W. B. Camp, Archt., Jacksonville, Fla.

Fla., Pensacola.—W. W. Flournoy of DeFuniak, Fla., and W. W. Downing, Brewton, Fla., acquired First National Bank Bldg. and will soon let contract to remodel and repaint for bank being organized.

Ga., Savannah.—Frank Whitney, Chas. J. Hunter and Ferris Cann will expend \$9,000 to improve old Chamber of Commerce Bldg.; marble front; 1 story; arcade approach to restaurant in rear.

Mo., Kansas City.—Altman Realty Co. will erect office building at 15th St. and Troost Ave.; 5 stories; fireproof; concrete and steel; provision for 2 additional stories; plans also include motion-picture theater to seat 1500, stores and arcade entrance; cost \$100,000; Carl Boller & Bro., Archts., Kansas City.

Mo., St. Joseph.—W. F. Kirkpatrick will let contract about Oct. 1 to erect physicians and surgeons' building; 3 stories; 60x120 ft.; concrete foundation; brick walls; concrete and wood floors; frame partitions; terra-cotta and brick exterior finish; cost about \$60,000; Walter Boschen, Archt., St. Joseph. (Previously noted.)

Okla., Grove.—First National Bank will erect addition to building; 2 rooms; each with frontage of 40 ft.; brick and stone.

Okla., Keystone.—State Bank of Keystone will erect bank building.

Okla., Okmulgee.—James Curtner will erect 2-story 100x108-ft. garage and office building

Fla., Jacksonville.—Mrs. Lillian M. K. Hawes postponed indefinitely erection of dwelling on St. Johns River as previously noted.

Fla., Palm Beach.—Walter Haselhurst will erect 2-story dwelling on Jessamine St.

Fla., Sebring.—Dr. F. E. Kiesling will erect bungalow; C. H. Wells, Archt. and Supt. of Constr.

Fla., St. Augustine.—Jack Hartley will erect bungalow.

Fla., Tampa.—B. P. Webber will erect 1½-story frame residence and garage; cost \$3750.

Ga., Atlanta.—E. E. Lawrence will erect 5 frame dwellings on Niles St. and Herndon St.; cost \$7500; day labor.

Ga., Atlanta.—R. C. Boone will erect residence at 11 E. Ontario St.; cost \$3000.

Ga., Atlanta.—John M. George will erect residence at 54 Highlandview St.; cost \$3500.

Ga., Atlanta.—A. H. Bailey will erect 1-story frame residence at 311 St. Charles St.; cost \$4000.

Ga., Atlanta.—C. Shelyerton will erect brick-veneer stucco residence on Spring St.; cost \$5300; day labor.

Ga., Atlanta.—Mrs. M. R. Emmons let contract to C. Shelyerton, Atlanta, to erect brick-veneer stucco residence at 180 E. 17th St.; cost \$6250.

Ga., Brunswick.—Dover Hall Club will erect 2 or 3 bungalows.

Ga., Columbus.—J. C. McCraney will rebuild dwelling at 18th St. and 15th Ave., recently noted burned; 32x57 ft.; brick and stucco; metal shingle roof; cost \$4000. Address Mr. McCraney, 1445 18th St.

Ga., Fitzgerald.—J. C. Brewer will erect residence.

Md., Baltimore.—C. Hampson, 205 St. Paul St., will erect 7 dwellings at Frederick Ave. and Gwynns Run; 2 stories; 14.6x42 ft.; brick; slag roof; hot-air heat; cost \$8000; plans and construction by owner.

Md., Baltimore.—Geo. Gunther is having plans prepared by Otto G. Simonson for adding to and remodeling dwelling at Charles and Bellona Aves.; building complete to be 62x128 ft.; 2 stories; frame; tile roof; hardwood floors; steam heat; electric light; cost about \$17,000; plans ready Sept. 15. (Noted in August.)

Md., Baltimore.—Geo. S. Wickes, 1904 Boone St., will erect 10 or 12 dwellings at Walbrook Ave. and 9th St.; 2 stories; brick; steam heat; cost about \$1500 each; construction about January.

Mo., Fayette.—L. B. Rummell, Brookfield, Mo., will erect several dwellings.

Mo., Kansas City.—G. W. Storek will erect two 2-story frame dwellings at 621 W. 59th St. and 411 W. 58th St.; cost \$10,000.

Mo., Kansas City.—J. C. Cogley will erect 2-story frame dwelling at 3417 Walrond St.; cost \$2500.

Mo., Kansas City.—Fred Bedell will erect residence at 73d and Terrace Sts.

St. Louis.—Clem Degenhardt will erect 15 bungalows in 6900 block Smiley and Arsenal Sts.; brick; 5 rooms and bath.

Mo., St. Louis.—Eugene Peck will erect 8-room residence on N. Market St.

N. C., Charlotte.—Julian H. Little will erect residence in Myers Park.

N. C., Greensboro.—Greensboro Warehouse & Storage Co. has plans by Raleigh James Hughes, 513-514 Banner Bldg., Greensboro, for six 7-room residences on Bessemer and Virginia Aves.; some hollow tile, some frame and brick-veneer, others frame and clapboard; wood shingle roofs; wood floors; city current electric light; cost \$2500 each; steam heat, \$300 each; date of opening bids not set, but probably about Oct. 15. Address Archt. (See Machinery Wanted—Brick.)

N. C., Wilmington.—A. S. Williams will erect residence at 15th and Princess Sts.; colonial style.

Okla., Kusa, P. O. at Henryetta.—Kusa Spelter Co. is reported to erect more than 100 5-room dwellings; 23 under construction.

Okla., Tulsa.—Capt. Constantine of Constantine Refining Co. will erect residence; cost \$15,000 to \$20,000.

Okla., Tulsa.—F. S. Henry will erect residence on S. Elwood Ave.

Okla., Tulsa.—Pat Malloy will erect residence in Stonebraker Heights.

S. C., Anderson.—Jas. F. McClure, Jr., has plans by Casey & Fant, Anderson, for dwelling in North Anderson; 8 rooms; bungalow type; brick veneer; tile or McMaster's Star cedar shingle roof; hardwood and pine floor; hot air or water heat; electric light;

cost about \$4000; owner will probably erect also 5-room dwelling and barn; probably construction by owner; bids opened about Sept. 28. Address owner. (See Machinery Wanted—Plumbing; Electrical Fixtures.)

S. C., Bamberg.—E. H. Henderson will erect residence on Railroad ave.; cost about \$4000.

Tenn., Nashville.—J. J. Bevington will alter residence at 825 19th Ave. S.; Harry J. Frahn, Archt., Nashville; bids closed Sept. 15.

Tenn., Nashville.—Mitch Bloomstein will erect brick veneer bungalow on 22d Ave. Address Bransford Realty Co.

Tex., Beaumont.—Mrs. L. Schwartz is having plans prepared by Mayer, Knoblock & Simank, Beaumont, for residence; 2 stories; cost \$4700.

Tex., Beaumont.—J. H. Phelan is having plans prepared by Babin & Beck, Beaumont, for residence; 2 stories; 10 rooms.

Tex., Dallas.—D. H. Spencer will erect residence in University Park; cost about \$6000.

Tex., Dallas.—Thos. R. Love will erect residence at 5122 Gaston Ave.; brick veneer; cost \$15,000.

Tex., Dallas.—A. D. R. Collie will erect residence; tile; cost \$10,000.

Tex., Dallas.—N. A. Williams will erect 2-story 20-room frame residence at 5204 Worth St.; cost \$9000.

Tex., Dallas.—J. W. Halsell will erect 11-room brick-veneer residence at 4942 Live Oak St.; cost \$6500.

Tex., El Paso.—W. W. Spitler will erect brick bungalow in Castle Heights; 32x62x20 ft.; cost \$4000.

Tex., El Paso.—Mayfield Building & Improvement Co. will erect brick bungalow in Alexander addition; 32x41x20 ft.; cost \$3850.

Tex., El Paso.—J. E. Bischoff will erect brick bungalow on Campbell St.; 25x120x20 ft.; cost \$5000.

Tex., Fort Worth.—A. H. Richterm will erect \$3000 residence at 2118 Fairmont Ave.

Tex., Fort Worth.—Lionel Bevan will erect \$3000 residence at 2501 6th Ave.

Tex., Houston.—Pleasant Graves will erect 7-room residence at Ross and Mt. Vernon Sts.; cost \$4700.

Va., Kilby.—D. L. Sumner will erect residence; 23x43 ft.; frame; 2 stories; 9 rooms and bath; Philip B. Moser, Archt., Norfolk.

Va., Norfolk.—Mrs. Mary J. Garner will erect 2-story frame residence at Newport and Virginia Aves.; cost \$3500.

Va., Portsmouth.—Planters' Mfg. Co. is reported to erect 50 additional residences for employees; cost \$25,000.

Va., Richmond.—C. P. and N. E. Lounnan will erect 2-story brick dwelling at 31st St. and Semmes Ave.; cost \$4500.

Va., Richmond.—W. C. Schaaf will erect two 2-story dwellings on Cary St.; cost \$3800.

Va., Richmond.—H. P. Carrington, Jr., will erect 2-story brick dwelling at 1513 West Ave.; cost \$900.

Va., Richmond.—Jos. S. Francis will erect 3 two-story brick dwellings on Taylor St. between Vine St. and Allen Ave.; cost \$14,000.

Va., Richmond.—H. P. Corning will erect 3-story brick and concrete residence at 1513 West Ave.; cost \$900.

Va., Staunton.—H. E. Gay will erect \$3000 residence.

W. Va., Wellsburg.—Mrs. George Fitch has plans by Edward Bates Franzheim, Schmulbach Bldg., Wheeling, for residence; 2½ stories; 40x60 ft.; cost \$12,000.

W. Va., Wooddale.—Charles Klein has plans by Edward Bates Franzheim, Schmulbach Bldg., Wheeling, for residence; 2 stories; hollow tile and stucco; cost \$8000.

GOVERNMENT AND STATE

Ala., Eufaula.—Postoffice.—C. S. McDowell, postmaster and custodian of site, opens bids Oct. 5 to repair and paint postoffice.

Fla., Jacksonville.—Postoffice.—P. A. Dignan, custodian, receives bids until Sept. 28 for miscellaneous repairs, etc., at U. S. postoffice; plans and specifications on application.

Ga., Atlanta.—Penitentiary.—Dept. of Justice, Office of Supt. of Prisons, Washington, D. C., opened bids to furnish steel cell fronts and mechanical locking devices for cell blocks in west main cell wing of United States Penitentiary; Mesker Bros. Iron Co., St. Louis, is lowest bidder at \$17,125, with alternate bid of \$15,875 for delivery in 4 to 6 months.

Mo., Fulton.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice building; Barhen Construction Co., Chicago, is lowest bidder at \$46,337 for limestone and \$46,703 for sandstone construction; 1 story and basement; brick, terra-cotta and stone; 3650 sq. ft. ground area; partly fireproof; composition and tile roof. (Lately noted.)

Mo., Moberly.—Postoffice.—Treasury Dept., James A. Wetmore, Act. Supvr. Archt., Washington, D. C., receives bids until Oct. 15 for extension, remodeling, etc., of postoffice; drawings and specifications from Custodian at Moberly and office of Mr. Wetmore as above.

N. C., Charlotte.—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice and courthouse; 2 stories and basement; 1700 sq. ft. ground area; fireproof; stone and brick face; composition and copper roof; John G. Unkefer, Minerva, O., is lowest bidder at \$192,000 for limestone construction, and J. A. Jones, Charlotte, is lowest bidder at \$207,000 for sandstone construction. (Lately noted.)

Va., Norton.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids Oct. 19 to erect postoffice; 2 stories and basement; 4000 sq. ft. ground area; fireproof except roof; brick and stone facing; composition roof; plans to be had of Acting Supervising Archt. or custodian of site at Norton. (Previously noted.)

W. Va., Huntington.—Barn.—State Board of Control, Jas. W. Lakin, Prest., Charleston, W. Va., plans to erect barn at West Virginia Colored Orphans' Home on Pea Ridge Rd.

HOSPITALS, SANITARIUMS, ETC.

Fla., Jacksonville.—City is having plans prepared by C. F. Streeter, Jacksonville, for city hospital; 4 stories and basement; 100 beds; reinforced concrete construction; concrete floor overlaid with battleship linoleum; city light; cost about \$50,000; Dr. M. B. Herlong, Chrmn. Comm. Address Archt. or Dr. Herlong. (Lately noted.)

Fla., Miami.—Hospital Com. selected plans by August Geiger, Miami, for city hospital; cost \$115,000.

Ky., Georgetown.—Scott County Medical Assn., Dr. D. H. Knox and others, propose erecting \$30,000 hospital.

Okla., Oilton.—Oil Field Hospital Assn. is being organized with Prof. Eastman, Supt. of Public Schools, Prest.; A. E. Pack, V. P.; Ed. L. Dunn, Treas.; Henry Fulton, Secy.; plans to erect hospital.

Va., Toms Creek.—Virginia Iron, Coal & Coke Co., general office, Roanoke, Va., will erect \$10,000 hospital.

W. Va., Martinsburg.—City will improve hospital, install additional lighting fixtures in lower hallway, extend hall to front of building, construct nurses' home, etc. Address The Mayor.

W. Va., Wheeling.—American Sheet & Tin Plate Co., Frick Bldg., Pittsburgh, Pa., will erect stucco on hollow tile office and hospital building at LaBelle plant; 1 story and basement; 52x33 ft.; cost \$15,000; Geo. C. Kimball, company's engineer.

HOTELS

Ky., Dawson Springs.—Park Realty Co., Nashville, Tenn., H. G. O'Kain, Mgr., will erect modern hotel; details undecided; cost \$250,000 to \$300,000. (Lately noted.)

Mo., St. Louis.—Una Pattee and others plan to erect 100-room hotel on Franklin Ave.; investment \$150,000.

S. C., Barnwell.—S. B. Moseley and T. S. Cave of Barnwell and W. S. Harvey, Philadelphia, Pa., contemplate erecting hotel; definite plans not determined.

Tex., Beaumont.—Likens Ogden is having plans prepared by Cook & Co., Beaumont and Houston, to remodel building at Pearl and Crockett Sts. for hotel; will raise 2-story building to 7 stories; roof garden; fireproof; cost \$85,000; A. L. Douglas will be manager.

Tex., Denison.—J. M. Crumpton, Propr. of Denison Hotel, will expend \$5000 for improvements; install heating plant, running hot and cold water in all rooms, additional baths, repaint and refinish all rooms, install floor in sample-room, etc.

MISCELLANEOUS

Ga., Atlanta.—Restaurant.—Harry Silverman, Prest. of Silverman Restaurant Co., will expend \$8000 to \$10,000 to remodel build-

ing at Peachtree and Pryor Sts. for restaurant.

Ga., Savannah.—Clubhouse.—Savannah Yacht Club will erect clubhouse; Henrik Wallin, Archt., Savannah.

Ga., Savannah.—Restaurant.—Frank Whitney and others will remodel building for restaurant, etc.

Md., Baltimore.—Stable.—Consolidated Gas, Electric Light & Power Co. will erect stable on Graves St. near Monument St.; 2 stories; 63x100 ft.; work in charge of electric emergency office, Monument and Constitution Sts.; bids opened Sept. 11.

Mo., St. Louis.—Clubhouse.—St. Louis Yacht Club is having plans prepared by Tom P. Barnett Co., St. Louis, for proposed clubhouse half mile from Chain of Rocks; 2 stories; Italian style; stucco; shower baths, etc.

Tenn., Morristown.—Market.—Masonic Temple Assn. plans to erect lodge and market building. (See Association and Fraternal.)

Tex., Galveston.—Pavilion.—G. K. Jorgensen will erect pavilion to accommodate bath and contain bathroom and plunge, theater, roof garden, dance floor, cafe, hotel, etc.; 230x158x242 ft.; 4 stories; reinforced concrete; connected with beach by steel and concrete viaduct; Galveston Natatorium Co. has been organized with \$175,000 to operate same. (Lately noted to erect bathhouse, but plan changed.)

Va., Norfolk.—Amusement.—Company is being organized to erect building for amusements, etc.; Ferguson, Calrow & Wren, Archts., Norfolk. (See Theaters.)

Va., Norfolk.—Clubhouse.—Tidewater Automobile Assn. does not plan erection of clubhouse as recently reported.

Va., Norfolk.—Clubhouse.—Tidewater Automobile Assn. plans to erect clubhouse; also plans \$25,000 appropriation with which to acquire toll roads and bridges within city limits.

RAILWAY STATIONS, SHEDS, ETC.

Ala., Gadsden.—Southern Ry. Co., W. H. Wells, Ch. Engr. Constr., Washington, D. C., will improve passenger station.

Fla., Ocala.—Atlantic Coast Line Ry., J. E. Willoughby, Ch. Engr., Wilmington, N. C., will begin erection of union station by Nov. 1; brick construction. (Previously noted.)

Ga., Macon.—Macon Terminal Co. submitted detailed plans to State Railroad Comm. for terminal station; center building 215x84 ft.; baggage and mail room 72x100 ft.; express room 72x117 ft.; brick or other fireproof material; exterior to have granite base; superstructure faced with terra-cotta or granite texture or gray brick with terra-cotta or limestone trimmings; floors of tile, marble or terrazzo; steam heat; electric lights; mechanical ventilating system; open covered concrete concourse 34 ft. wide; concrete track platforms with metal butterfly canopy; short stairways between main concourse and track platforms enclosed with glass sash and provided with doors at foot of stairs; estimated cost of buildings with platforms and approaches, \$650,000; total cost, including real estate, etc., \$1,100,000; Fellheimer & Long, Archts., 7 E. 43d St., New York. (Noted in August.)

Ga., Savannah.—Midland Ry. (Geo. M. Brinson and others) is having plans prepared by Henrik Wallin, Savannah, for station and warehouses.

Okla., Henryetta.—St. Louis & San Francisco R. R. V. K. Hendricks, Engr., St. Louis, will erect depot.

Tex., Galveston.—International & Great Northern Ry., O. H. Crittenden, Ch. Engr., Houston, Tex., will expend \$4000 to refinish and remodel interior of freight and ticket office.

Va., Newport News.—Chesapeake & Ohio Ry. Co., F. I. Cabell, Ch. Engr., Richmond, Va., is reported to erect general office building on site of structures lately noted damaged by fire; plans only tentative at present; cost not determined; brick construction.

SCHOOLS

Ala., Alton.—See Ala., Lovick.

Ala., Lovick.—Jefferson County Board of Education, Birmingham, Ala., will erect schools at Lovick and Alton.

Ala., Phenix City.—School Board plans to erect colored school to replace present structure; A. H. Kittrell, Chrmn.

Ark., King.—Board of Education opens bids Sept. 25 to erect school; 40x80 ft.; brick; metal shingle roof; wood floor; cost about \$8000; Jas. H. Bliss, Archt., Hope.

Ark., plans with Archt.

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Fla., Clearwater.—Board of Education, Pinellas County, opens bids Sept. 17 and 21, respectively, to erect school buildings; for-
mer on Fort Harrison Ave.; 62x77 ft.; \$900
hot-water heat; both 2 stories; brick; asbes-
tos shingle roof; cost of each about \$10,000;
details of latter not available. (Lately
noted.)
Fla., Key West.—County School Board,
Virgil S. Lowe, Supt., will erect gymnasium
at Division Street School grounds.
Fla., Miami.—Hallandale School Dist.
voted \$15,000 bonds to erect school; C. V.
Palquist, W. H. Strickland and H. T.
Cigars, Inspectors.
Fla., Safety Harbor.—School Trustees re-
ceive bids until Sept. 17 to erect brick
school; Lester Avery, Archt., Clearwater.
(Previously noted.)
Fla., Sanford.—Seminole county voted \$75-
00 school bonds; will expend \$15,000 to im-
prove and enlarge grammar school, erect
500 primary school on west side, expend
\$500 to improve colored school, improve
white primary school, expend \$2500 for fur-
niture and furnishings, etc.
Ga., Cleveland.—A. H. Henderson, Jr., Sec-
retary Board of Trustees, is receiving bids
to erect school; sold \$10,000 bonds.
Ga., Coolidge.—City voted \$15,000 bonds to
erect school, etc. Address The Mayor. (Lately
noted.)
Ga., Rebecca.—City, W. K. Holt, Mayor,
ordered election for Oct. 4 on \$8000 bonds to
erect school.
Ky., Ludlow.—City voted \$30,000 bonds to
erect school building.
La., Lake Charles.—City votes Oct. 8 on
\$15,000 bonds to purchase site and erect
high school. (Lately noted.)
Miss., Macon.—Strong & Bush, Attys., re-
ceive bids until Sept. 20 to erect school at
Center Point School Dist.; plans and specifi-
cations at office of Chancery Clerk of Nox-
ubee County, Macon; D. W. Dent, J. B.
White, L. S. Shepherd, Trustees. (Lately
noted to have voted \$4000 bonds.)
Mo., Jennings, P. O. at St. Louis.—Bar-
nett, Haynes & Barnett, 949 Century Bldg.,
St. Louis, are preparing plans for group of
buildings near Jennings for Jesuit Province
of Missouri; estimated cost \$400,000; archi-
tects wire Manufacturers Record: "Informa-
tion not ready."
Mo., St. Joseph.—City will let contract
latter part of Sept. to erect high school,
gymnasium and auditorium building; 2 sto-
ries and basement; 81x100 ft.; concrete and
brick; cost about \$25,000; Trunk & Gordon,
Archts., Donnell Court Bldg., St. Joseph.
N. C., Franklin.—Macon County Board of
Education, M. D. Billings, County Supt., re-
ceives bids until Oct. 4 to erect 2-room school
in Dist. 1 and 3, Millshool Township; bids
for material and construction, or construc-
tion alone; plans and specifications at office
of Mr. Billings.
N. C., Greenville.—Board School Trustees,
F. C. Harding, Chrmn., opens bids Sept. 29
to erect high-school building; 80x110 ft.; or-
dinary construction; Carey roof; wood
floor; steam heat; cost about \$20,000; Henry
E. Bonitz, Archt., Wilmington, N. C.; plans
to be had of Archt. (Lately noted.)
S. C., Bannockburn.—J. S. McKenzie,
Chrmn., Board of Trustees, receives bids un-
til Sept. 18 to erect 2-story school in Tans-
bay township, near Bannockburn; 75x90 ft.;
frame; cypress shingle roof; pine floor;
plans and specifications at office of L. McD.
Hicks, Archt., Florence, S. C., and store of
J. S. McKenzie & Son, Bannockburn.
S. C., Gaffney.—Trustees of School Dist.
No. 10, W. S. Hall, Secy. pro tem., plans to
erect school.
Tenn., Chattanooga.—University of Chat-
tanooga selected plans by W. T. Downing,
Grant Bldg., Atlanta, Ga., for buildings to
include administration, science, liberal arts
and chapel buildings; former 50x80 ft.; en-
trance through stone archway; brick-lined
vestibule with stone floor; stone steps lead-
ing to first floor hall; halls with tile floor
and brick walls; reading-room walls of brick
with half-timber ceiling; science and liberal
arts building 50x150 ft. each; 3-story tower
40x100 ft. connecting these 2 structures;
chapel 40x100 ft.; nave walls brick; cathe-
dral leaded plate-glass windows; tile aisles;
Gothic style; cloisters connecting all struc-
tures; will remodel present science building
for dormitory; construct concrete bleachers
on Chamberlain field; drive parkway be-
tween Oak St. and McCallie Ave.; cost about
\$500,000. (Noted in June.)
Tenn., Knoxville.—Special School Com.
recommended plans by A. B. Baumann,
Knoxville, for negro high school; S. G.
Heiskell, Mayor. (Previously noted.)

Tex., Corsicana.—City ordered election for
Oct. 10 on \$125,000 bonds to include \$25,000
for school improvements, etc. Address The
Mayor. (Lately noted.)
Tex., Fort Worth.—Diamond Hill School
Dist. voted \$35,000 school bonds. Address
Dist. School Trustees.
Tex., Houston.—County, J. W. Lyle, School
Supt., will erect 2 one-story brick schools
in Dist. No. 4, Harris county; F. S. Glover
& Son, Archts., Houston.
Tex., Pledger.—Trustees of Dist. No. 4,
Matagorda county, receive bids until Sept.
18 to erect 3-room brick school; plans and
specifications at office of County Supt. of
Schools, Bay City, Tex.; Board of Trustees,
Pledger, and C. H. Myers & Co., Archts., 614
Milam St., Houston.
Tex., San Antonio.—West Texas Military
Academy has plans by Albee B. Ayres, San
Antonio, for swimming pool and chapel build-
ing; 2 stories; fireproof; exterior cement-
stucco; pool on ground floor 20x90 ft. from
2 to 6 1/2 ft. deep, supplied with running water,
which is to be heated at all times in cool
season; dressing-rooms, lockers, showers,
etc.; upper floor for chapel to seat 300.
Tex., Temple.—Midway School Dist. plans
to erect agricultural high school; Sam H.
Carter, J. L. Deavers and J. Y. Cummings,
Com.
Va., Lexington.—Virginia Military Insti-
tute, Gen. E. W. Nichols, Supt., opens bids
Oct. 11 to erect Jackson Memorial Hall; will
contain gymnasium, running track, swim-
ming pool, etc.; has \$100,000 appropriation;
Bertram G. Goodhue, Archt., 2 W. 47th St.,
New York. (Lately noted.)
W. Va., Bluefield.—C. R. Murray, Supt. of
Schools, opened bids to erect graded school
in South Bluefield; 140x140 ft.; brick; slow-
burning construction; Barrett roof; maple
floors; steam heat; electric lighting; J. F.
Barbour & Co., Roanoke, Va., are lowest
bidders at \$29,000; Pedigo & Gary, Archts.,
Kelley & Moyer Bldg., Bluefield.
W. Va., Janelaw.—Board of Education of
Hackers Creek Dist., Lewis county, will
erect school at Deanville, rebuild Laurel
Point School on Maxwell's Run, also paint
schools at Lower Jesse Run, Buckhannon
Run and Bush or Bass Run; L. G. Light-
burn, Secy., Janelaw, R. F. D. No. 2; bids
received until Sept. 10.
W. Va., Shenandoah Junction.—Board of
Education of Charles Town Dist., John D.
McGarry, Prest., receives bids until Sept. 20
to erect school; drawings and specifications
at office of Secy. of Board; 1 story; 60x70
ft.; brick; J. W. Woltz, Archt., Waynesboro,
Pa. (Lately noted.)

STORES

Ala., Birmingham.—United Cigar Stores
Co. will remodel building at 213 N. 20th St.
Ala., Birmingham.—R. W. Carlisle will
erect 2 one-story frame buildings at McMil-
ton Ave. and 17th Way; cost \$3000.
Ala., Birmingham.—A. A. Adams will erect
1-story brick building at 3d Ave. and 21st
St.; cost \$3300.
Ark., Blytheville.—Allen Walton will erect
business block; 2 stories; upper floor for
lodgerooms; H. A. Lesmeister, Jr., Archt.,
Jonesboro, Ark.
Ky., Morehead.—J. F. Knapp is erecting
business block and opera-house; sawed stone
brick, furnished by Kentucky Bluestone Co.,
Freestone, Ky.; steam heat. Address owner.
(See Machinery Wanted—Heating, Steam;
Theater Equipment.)
Mo., Kansas City.—Dr. Geo. Koch will
erect 2-story hollow tile building at 3015 Lin-
wood St.; cost \$6500.
Mo., Kansas City.—A. E. Lombard will
erect building to contain 3 stores on Main
St.; English type; 3 stories; English half-
timber front; H. S. Bill, Archt., Kansas
City.
Mo., Kansas City.—Altman Realty Co. will
erect building for stores, etc. (See Bank
and Office.)
Mo., St. Louis.—Henry Flach will erect
building at Spring and McDonald Aves.; 2
stories; 2 stores and 2 five-room apart-
ments; brick; reinforced-type construction;
cost about \$20,000.
N. C., Charlotte.—A. D. Neal, 31 S. Tryon
St., will erect 3-story brick building on S.
Church St. to be occupied by U. S. Tire Co.
N. C., Wilmington.—Estate of Sam Bear,
Sr., & Sons is having plans prepared by H.
E. Bonitz, Wilmington, for business build-
ing on N. Front St.; 45x70 ft.; pressed-brick
front; limestone trimmings; 2 stories with
basement; cost \$7000; construction begins
Oct. 1.

Okla., Chandler.—Chas. Tighman will erect
2-story brick business building.
Okla., Grandfield.—C. S. Tant will erect 2
buildings 25x80 ft. with warehouse in rear
50x59 ft.; completion in 60 days.
Okla., Holdenville.—M. P. Embach will
erect brick business building; 40x70 ft.
Okla., McAlester.—A. O'Reilly will erect
business building; 2 stories; brick; 28x50 ft.;
basement finished with cement floor and
walls; drab brick; 65-ft. plate glass.
Okla., McAlester.—John A. Harrison and
Fletcher Arnold will erect business building;
2 stories; brick; frontage 110 ft.; front fin-
ished in red pressed brick; cost about \$12,000.
Okla., Norman.—J. Martha Wise has plans
by Hawk & Parr, Oklahoma City, for busi-
ness building; 50x60 ft.; brick; tar and
gravel roofing; steam heat; cost about \$6000.
Tenn., Nashville.—Mrs. M. Freidland will
erect store building at 509 3d Ave. N.; 2
stories; brick; bids due Sept. 18.
Tenn., Nashville.—S. C. Austin has plans
by Harry J. Frahn, Nashville, for store
building at 12th and Grundy Sts.; 2 stories;
brick.
Tex., Alice.—J. R. Chandler, Kingsville,
Tex., is having plans prepared by Sumrall &
Knacker, Alice, for 2 brick storerooms; 25x80
ft. each; construction begins by Oct. 1.
Tex., Falfurrias.—Manuel Garcia will erect
2-story brick business building at Rice and
Lasater Sts.; frontage 50 ft.
Tex., Mt. Calm.—J. R. Jones will erect
business building; brick or tile; 25x90 ft.;
will replace burned structure.
Va., Norfolk.—Company is being organized
to erect building for stores, etc.; Ferguson,
Calrow & Wrenn, Archts., Norfolk. (See
Theaters.)
THEATERS
Mo., Kansas City.—Altman Realty Co. will
erect building for theater, etc. (See Bank
and Office.)
Okla., Lawton.—J. D. Ramsey, Sulphur,
Okla., is remodeling opera-house. (Noted
in August under Stores.)

THEATERS

Ark., Texarkana.—Mrs. Anna McCartney
will erect 10-room apartment building at 7th
and State Line Aves.; brick and stucco; let
contract to Mr. Stevens, Texarkana.
Ga., Fitzgerald.—Mrs. J. H. Ennis let con-
tract to erect store and apartment building.
(See Stores.)
Ga., Savannah.—Chatham Artillery let con-
tract to T. H. Jones, Savannah, to erect
apartment-house on Duffy St.; 2 stories;
brick.
Ky., Lexington.—Buford Allen let contract
to erect store and apartment-building. (See
Stores.)
Mo., St. Louis.—Daisy Kenefick let con-
tract to Bonded Building Co., St. Louis, to
erect 2-story tenement-house at 2951-53 Flad
St.; cost \$6000.
Mo., St. Louis.—Nellie Moran let contract
to J. Moran, St. Louis, to erect 2-story ten-
ement-house at 4948-50 McRee St.; cost \$5300.
Mo., St. Louis.—Chas. F. Acker let con-
tract to E. C. Fendler, St. Louis, to erect 2-
story tenement-house at 439 Bates St.; cost
\$3000.
Tex., El Paso.—H. O. Kane let contract to
T. F. Nieland, El Paso, to erect apartment-
house at River and Campbell Sts.; four
5-room suites; cost \$12,000.
W. Va., Beckley.—Ewart Realty Co. let
contract to Crozier & Freeman, Beckley, to
erect apartment and store building on Main
St.; brick; concrete, wood and tile floor;
J. M. asbestos roof; hot-water heat; electric
light; cost \$13,000; A. F. Wysong, Archt.,
Princeton, W. Va. (Previously noted.)

BANK AND OFFICE

Ga., Bainbridge.—Richardson Engineering
& Constructing Co., Bainbridge, was award-
ed contract to erect office building; 4 stories;
40x70 ft.; ordinary construction; tin roof;
wood floor; cost \$35,000; heating plant, \$2000;
lighting, \$500; plans by contractor. (Con-
struction begun.)
Mo., Caruthersville.—James R. Moore let
contract to J. W. Carneau, Caruthersville,
to erect office building; 3 rooms; 16x50 ft.;
hollow concrete walls; brick front; asbestos
roof; vault; completion by Oct. 15.
Tenn., Nashville.—Nashville Property Co.
let contract to Southern Ferro Construction
Co., Atlanta, to erect building at Church

Tex., Galveston.—G. K. Jorgensen will
erect building for theater, etc. (See Miscel-
laneous.)
Tex., Waco.—Las Moras Co. purchased
Majestic Theater for \$70,000 and will im-
prove.
Va., Norfolk.—Company is being organized
with \$25,000 capital stock to erect Park The-
ater and amusement building on Park Ave.
near Brambleton Ave.; 2 stories; lower floor
for theater and 2 stores, upper floor for
lodgerooms, assembly or dance hall, base-
ment for amusements; Ferguson, Calrow &
Wrenn, Archts., Norfolk.
WAREHOUSES
Ga., Jefferson.—Farmers' Union of Jackson
County will erect cotton warehouse.
Ga., Lafayette.—C. C. Bass, Rome, Ga.,
will erect cotton warehouse; 60x100 ft.; com-
pletion by Oct. 10.
Ga., Tignall.—Tignall Warehouse Co. in-
corporated with \$10,000 capital stock by C.
D. Bolton, J. J. Wilkinson, W. J. Adams and
S. A. Ware.
Md., Frederick.—Chas. E. Klein will erect
warehouse.
N. C., Asheville.—Standard Oil Co., 26
Broadway, New York, is reported to erect
warehouse; fireproof; steel and concrete.
Okla., Chickasha.—Doughty & McDonald
will erect warehouse; 75x150 ft.; L. P. Lar-
sen, Archt., Chickasha, will purchase mate-
rials, which include gas burned brick, mill-
work, stone, cement, lime, steel awnings,
steel, tar and gravel roofing, wood flooring,
2 skylights, electric fixtures, electric freight
elevator, 2500-bbl. tank, etc.; cost about
\$10,000.
Okla., Grandfield.—C. S. Tant will erect
warehouse. (See Stores.)
Tenn., Knoxville.—Knoxville Cotton Ware-
house inceptd. with \$5000 capital stock by
John M. Thornburg, J. Pike Powers, Jr., L.
R. Coleman and others; will erect cotton
warehouse.
Tex., Houston.—City, Ben Campbell, Mayor,
will construct fire walls at municipal cotton
sheds; E. E. Sands, City Engr.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ark., Texarkana.—Mrs. Anna McCartney
will erect 10-room apartment building at 7th
and State Line Aves.; brick and stucco; let
contract to Mr. Stevens, Texarkana.
Ga., Fitzgerald.—Mrs. J. H. Ennis let con-
tract to erect store and apartment building.
(See Stores.)
Ga., Savannah.—Chatham Artillery let con-
tract to T. H. Jones, Savannah, to erect
apartment-house on Duffy St.; 2 stories;
brick.
Ky., Lexington.—Buford Allen let contract
to erect store and apartment-building. (See
Stores.)
Mo., St. Louis.—Daisy Kenefick let con-
tract to Bonded Building Co., St. Louis, to
erect 2-story tenement-house at 2951-53 Flad
St.; cost \$6000.
Mo., St. Louis.—Nellie Moran let contract
to J. Moran, St. Louis, to erect 2-story ten-
ement-house at 4948-50 McRee St.; cost \$5300.
Mo., St. Louis.—Chas. F. Acker let con-
tract to E. C. Fendler, St. Louis, to erect 2-
story tenement-house at 439 Bates St.; cost
\$3000.
Tex., El Paso.—H. O. Kane let contract to
T. F. Nieland, El Paso, to erect apartment-
house at River and Campbell Sts.; four
5-room suites; cost \$12,000.
W. Va., Beckley.—Ewart Realty Co. let
contract to Crozier & Freeman, Beckley, to
erect apartment and store building on Main
St.; brick; concrete, wood and tile floor;
J. M. asbestos roof; hot-water heat; electric
light; cost \$13,000; A. F. Wysong, Archt.,
Princeton, W. Va. (Previously noted.)

St. and Polk Ave. for office and store pur-
poses; 3 stories; fireproof; steel frame;
brick walls; terra-cotta trim; terra-cotta
wall and floor tile; foundations to carry 2
additional stories if desired; cost about
\$120,000; Thos. W. Gardner and Edw. E.
Dougherty, Archts., Stahlman Bldg., Nash-
ville. (Previously noted.)
Tenn., Springfield.—People's Natl. Bank let
contract to W. R. Smith, Springfield, to re-
model bank quarters; brick and stone; Marr
& Holman, Archts., Nashville, Tenn. (Lately
noted.)
CHURCHES
Fla., Kissimmee.—First Baptist Church let
contract to Smith & Smith, Kissimmee, to
erect bungalow Sunday-school building at
Lafayette St. and Plant Ave.; 20 rooms.
Fla., Tampa.—First Baptist Church let
contract to Smith & Smith, Tampa, to erect
bungalow for Sunday-school building; 20
rooms; 36x100 ft.; fireproof roof; A. L.
Shaw, Archt., Tampa. (Lately noted.)
Ga., Atlanta.—West End Presbyterian
Church let contract to W. E. Mashburn, At-
lanta, to alter building at Gordon and Ashby
Sts.; cost \$7500. (Lately noted.)
Ky., Hopkinsville.—Methodist church, Rev.
Lewis Powell, pastor, let contract to Forbes
Mfg. Co., Hopkinsville, to erect building;
brick and stone; tile roof; steam heat; cost
\$48,075 for building alone; furniture, organ,
etc., cost several thousand dollars addi-
tional; John Gaisford, Archt., Memphis,
Tenn. (Lately noted.)
Mo., St. Louis.—Holy Name Church, Grand
and Emily Aves., Rev. C. E. Byrne, pastor,
let contract to erect building; seating ca-
pacity 900; site 141x135 ft.
N. C., Charlotte.—Hebrew United Brother-
hood let contract to J. F. Richards, Char-
lotte, to erect synagogue on W. 7th St.; 60x
100 ft.; brick; solid veneer brick front; in-
terior plastered; seating capacity 200; elec-
tric and gas lights; H. Miller, Chrmn.,
Bldg. Com.
Tex., Galveston.—German Lutheran church
has plans by Walter S. Murdock, Galveston,
and is reported to have let contract to com-
plete erection of \$15,000 building at 24th
and Winde Sts.; brick; fireproof; trimmed with
solid concrete; Gothic style; 110x40x75 ft.;
folding and sliding doors and partitions.
(Lately noted.)

CITY AND COUNTY

Fla., Apopka—Firehouse.—City let contract to H. H. McClure, Apopka, to erect fire station.

La., Hammond—Jail.—City Com. let contract to J. R. Southerlin & Co., Commerce Bldg., Kansas City, Mo., to erect jail; X. A. Kramer, Consult. Engr., Magnolia, Miss. (Lately noted.)

La., New Orleans—Warehouses.—New Orleans Levee Board let contract to Geo. C. Leone & Co., New Orleans, to erect 1-story warehouse; cost \$3500. (Previously noted.)

N. C., Greenville—Stable.—City let contract to Everett Stroud to erect stable on Catouch St.; 40x94 ft.; brick; asbestos roof; cement floor; cost, without equipment, \$1750. (Lately noted.)

Okl., Antlers—Jail.—County Commrs. let contract to Lisle-Dunning Construction Co., Oklahoma City, to erect 2-story brick and cement jail; cost \$14,100.

Tenn., Nashville—Asylum.—Foy-Proctor Co., Nashville, general contractor to erect county asylum, let following subcontracts: Heating, plumbing and ventilating, T. J. Mooney Co.; brick work, Bush Building Co.; electrical work and plastering, Maddux & Hutchison; marble and tile, Schueler Bros.; cut stone, Nashville Cut Stone Co.; all of Nashville; plans by Edw. E. Dougherty, Candler Bldg., Atlanta, call for structure 40x105 ft.; reinforced concrete; slate roof; slab floor construction; heat from present plant; windows with steel frame set in steel facings; cost \$70,500. (Lately noted.)

Tex., Cisco—City Hall.—City let contract to A. J. Alson, Cisco, to erect city hall; 50x90 ft.; brick; tar and gravel and slate roof; cement floor; electric light; gas heat; cost \$10,500; C. H. Leinbach, Archt., Dallas. Address Contr. or J. M. Williamson, Mayor. (Lately noted.)

Tex., San Marcos—City Hall.—City let contract to Goslin, Kennedy & Goodman, San Marcos, to erect city hall and fire station complete, except sewerage, plumbing and electric work; plans by Roy L. Thomas, 502 Scarbrough Bldg., Austin, Tex., call for fireproof structure; reinforced concrete; brick veneered; 56x70 ft.; 2 stories; stone trimmings; steam heat; water-works; electric fixtures; cost about \$20,000; also let contract for plumbing and wiring (Lately noted.)

Tex., Dallas—Farm.—County Commrs. let contracts as follows to erect building for men at county farm: Building proper at \$26,880 to Enniston & McCord; plumbing at \$1344 to C. Wallace Plumbing Co.; heating at \$950 to Kinnison Bros.; wiring and fixtures at \$825 to Cammack Electric Co.; all of Dallas; Woerner & Cole, Archts., Dallas. (Lately noted.)

W. Va., Beckley—Jail.—Raleigh county let contract to D. J. Phipps, Roanoke, Va., to erect lately-noted jail and sheriff's residence; 42x80 ft.; 3 stories; fireproof; slate roof; reinforced concrete floors; steam heat; electric lighting; cost \$40,000; B. F. Smith, Archt., Washington, D. C. Address contractor. (See Machinery Wanted—Laundry Machinery.)

DWELLINGS

Ala., Birmingham.—E. T. Wilcox let contract to J. G. Harris, Birmingham, to erect 2-story brick-veneer residence.

Ala., Girard—Wm. Earl Morgan let contract to J. O. Smith, Columbus, Ga., to erect dwelling; 6 rooms; frame; shingle roof; cost \$2500; plans by contractor. Address Mr. Morgan. (Lately noted.)

D. C., Washington.—E. Z. Zimmerman let contract to W. L. Turner, 41 Q St. N. W., Washington, to erect dwelling at 509 Q St. N. W.; 2 stories; brick; cost \$3300; Wilson & Pirie, Archts., 410 Washington Loan & Trust Bldg., Washington.

Fla., Gainesville.—J. J. Haymans let contract to Goin & Millner, Gainesville, to erect \$3000 residence.

Fla., Orlando.—John Hand let contract to Leonard D. Long, Orlando, to erect dwelling on Lakeview Ave.; bungalow type; mill construction; composition roof; cost \$3800; plans by contractor. (See Machinery Wanted—Building Material, etc.)

Ga., Atlanta.—Central Realty Co. will erect 1-story frame dwelling at 133 17th St.; cost \$4000; J. F. Higdon, Contr., Atlanta.

Ga., Atlanta.—R. C. Bone let contract to J. L. Denman, Atlanta, to erect frame dwelling at 11 E. Ontario St.; cost \$3000.

Ga., Bainbridge.—Richardson Engineering & Constructing Co., Bainbridge, has contract to erect dwelling; 2½ stories; 50x70 ft.; ordi-

nary construction; shingle roof; cost \$18,000; heating, \$1500; lighting, \$500.

Ga., Moultrie.—A. O. Thaxton let contract to G. C. Hall, Moultrie, to erect 8-room bungalow; contract for electric wiring and fixtures let to Moultrie Electric Co.

Ga., Moultrie.—W. C. Vereon let contract to G. W. Milligan, Moultrie, to erect residence; 8 rooms; owner will purchase and install electric fixtures.

La., New Orleans.—M. W. Land let contract to Geo. H. Kent, New Orleans, to erect 2-story frame residence; cost \$4074.

La., New Orleans.—People's Homestead Assn. let contract to Theard & Reilly, New Orleans, to erect residence; cost about \$3000.

La., New Orleans.—Mrs. Chas. O. Champin let contract to G. E. and E. E. Reimann Co., New Orleans, to erect frame residence; cost \$3420.

La., New Orleans.—Security Building and Loan Assn. let contract to R. W. Markel, New Orleans, to erect 2-story residence; cost \$3175.

Md., Baltimore.—A. K. Gordy let contract to Webb & White, 729 Title Bldg., Baltimore, to erect dwelling on Morelo Rd. near Alisa Ter.; 22x38 ft.; 2 stories; frame; stone foundation; slate roof; hardwood floor; steam heat; gas and electric light; cost \$3000; T. H. Webb, Archt., 729 Title Bldg., Baltimore.

Miss., Clarksdale.—Dist. Atty. Dan Brewer let contract to G. H. Rice, Clarksdale, to erect brick bungalow; furnace heat; laundry; artesian well; contract for brick let to Reinhardt & Son.

Mo., Kansas City.—Fred L. Richt let contract to E. Jarman, 5534 Paseo St., Kansas City, to erect dwelling at 56th and Paseo Sts.; 26x45 ft.; brick; heat undecided; electric light; cost \$4500; J. G. Brackelin, Archt., 315 Massachusetts Bldg., Kansas City. (Lately noted.)

Mo., Kansas City.—Fred Altergott let contract to C. Schaper, 2315 Campbell St., Kansas City, to erect dwelling at 1020 Westover Rd.; 2 stories; brick; tile roof; oak floor; cement walk; cost \$20,000; hot-water heat, about \$3000; electric light, \$300; Shepard, Farr & Wiser, Archts., R. A. Long Bldg., Kansas City. Address owner. (Noted in Aug.)

Mo., St. Louis.—R. J. Baldwin let contract to C. W. Nichols, St. Louis, to erect 2 one-story dwellings at 2312-28 Calvary St.; cost \$4000.

Mo., St. Louis.—J. J. Barrett let contract to W. Ogilbee, St. Louis, to erect 2-story dwelling at 5048 Northland St.; cost \$3800.

Mo., St. Louis.—C. McEldowney let contract to C. Swinhart, St. Louis, to erect 2-story dwelling at 2224 Alice St.; cost \$3000.

Mo., St. Louis.—F. J. Remmers Contracting & Building Co., 905 Cass Ave., St. Louis, Gen. Contr. to erect dwelling for Daniel Catlin at 5285 Westmoreland Pl. at a cost of \$74,000, let subcontracts at follows: Concrete and cut stone, St. Louis Contracting Co., 445 Clayton Ave.; plumbing, Gloeckner-Melville Plumbing Co., Clarendon and Suburban Tracks; fireproofing, P. M. Bruner Granitoid Co., Frisco Bldg.; stairs, John W. Reinhardt, 25 W. 15th St.; tile roof, Central Slate & Tile Roofing Co., Title Guarantee Bldg.; brickwork, Daues Bros., 2756 Charlotx Ave.; metal work, Kaynsing Iron & Foundry Co., 2521-5 Montgomery St., and Wand & Niehaus, Page and Cora Aves.; millwork, Lauritz Petersen, Lyons and Lynch Sts.; weather and damp-proofing, General Weatherproofing Co., Boatmen's Bank Bldg.; painting, Englemann-Jahns Painting Co., 3132 Olive St.; glass, Thatcher-Kerwin Glass Co., 921-9 N. 6th St.; cork tile, D. and E. Kennedy, Inc., Century Bldg.; marble, St. Louis Marble & Tile Co., Cardinal and Adams Sts.; all of St. Louis; plans by Jas. P. Jamieson, Security Bldg., St. Louis, call for building 2 stories; fireproof. (Lately noted.)

Okl., Hugo.—F. C. Latimer let contract to S. Corgan, Hugo, to erect 2-story residence; hardwood flooring; brick; cost \$2890.

S. C., Florence.—Mrs. Norma Howie Wyson let contract to J. E. and B. F. Taylor, Florence, to erect dwelling at Irby and Palmetto Sts.; 42x68 ft.; frame; shingle roof; wood floor; cost \$5000; Jas. D. Benson, Archt., Charleston, S. C. (Lately noted.)

Tenn., Memphis.—E. C. Cook let contract to W. D. Derryberry, Memphis, to erect 2-story 8-room brick-veneer residence at 1791 Peabody Ave.; cost \$5000; heating \$500.

Tenn., Memphis.—R. Galloway let contract to F. L. Smith, Memphis, to erect 1-story 6-room brick-veneer residence at 1773 Galloway St.; cost \$3000; heating \$500.

Tenn., Nashville.—W. F. Holt, Nashville, Tenn., Gen. Contr. to erect residence for Dr. Geo. W. Hale, let following subcontracts in connection therewith: Plastering, S. J. & O. LeSueur; painting, J. K. Bernal; glazing, Riddle Co.; millwork, Davison, Hicks & Greene Co.; brick work, Fulcher Brick Co.; plumbing and heating, David Grewar Co.; electrical work, Herbrick & Lawrence; all of Nashville; plans by Edw. E. Dougherty, Atlanta, call for plastered brick-veneer structure; 36x66 ft.; California redwood roof; vapor heat; cost \$10,000.

Tenn., Nashville.—W. F. Holt, Nashville, Gen. Contr. to erect residence for Richard S. Plater, let following subcontracts in connection therewith: Painting, J. K. Bernal; plastering, F. H. Polk; millwork, Indiana Lumber Co.; brick work, Fulcher Brick Co.; all of Nashville; plans by Russell E. Hart, Nashville, call for 2-story frame structure; shingle roof; cost \$25,000. (Other contracts lately noted.)

Tenn., Nashville.—J. H. Corbett will erect 2-story brick residence on 10th Ave. S.; contract to be let in detail; foundation, painting and carpenter work previously let.

Tex., Alice.—W. A. Wise let contract to Mr. Hudson, Alice, to erect residence.

Tex., El Paso.—T. M. Courchesne let contract to Geo. L. Sharp, El Paso, to erect dwelling on Richmond Ter.; brick; red wood shingle roof; hard and soft wood floor; electric light; cost \$3000; hot-air heat, \$175; Jas. L. Marr & Co., Archts. (Lately noted.)

Tex., El Paso.—A. E. Rowlands let contract to erect dwelling on Elm St.; 26x50 ft.; brick; shingle roof; white maple floor; cost \$3750; hot-air heat \$105; S. E. Patton, Archt., 509 Caples Bldg., El Paso. (Noted in Aug.)

Tex., Paris.—R. E. Stevens let contract to J. L. Stockey, Paris, to erect residence; 2 stories; 7 rooms; 30x60 ft.; brick veneer; metal or Spanish clay tile roof; hardwood floors; electric fixtures; cost \$6500.

Tex., San Antonio.—A. F. Seidel let contract to Estuquest & Mosaly, 7117 W. Mulberry St., San Antonio, to erect dwelling at 912 Van Ness St.; 5 rooms; frame; shingle roof; electric light; cost \$3000. (Lately noted.)

GOVERNMENT AND STATE

D. C., Washington—Laboratory.—Bureau of Standards let contract to Wells Bros. Co., Riggs Bldg., Washington, to erect laboratory building at Connecticut Ave. and Pierce Mill Rd.; 190x66 ft.; 5 stories; fireproof; tile roof; concrete floor construction, overlaid in halls with tile, in laboratories with wood; steam heat from central heating plant; electric light; passenger elevator about 5x7 ft.; Donn & Deming, Archts., 808 17th St., Washington. (Noted in Aug. to have rejected bids; Wells Bros. Co. previously noted low bidders.)

Ga., Milledgeville.—Stockade.—State will erect stockade buling for negro prisoners on State farm; 200x13 ft.; 2 stories; brick; tar and gravel roof; concrete floor probably electric light cost about \$10,000; work by convict labor; let contract to J. W. McMillan, Milledgeville, for brick and other materials. Address R. E. Davidson, Chrmn. Prison Comm. of Atlanta, Ga. (Lately noted.)

Mo., St. Louis—Custom-house.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$7800 to American Venetian Marble Co., Kansas City, Mo., for floor in lobbies and corridors of custom-house.

Okl., Blackwell—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to Algernon Blair to erect postoffice; cost \$36,444; 2 stories and basement; ordinary construction; stone and stucco; 4045 sq. ft. ground area. (Lately noted.)

Tex., Cuero —Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to Richardson Engineering & Constructing Co., Bainbridge, Ga., at \$48,470 to erect postoffice; fireproof; tile roof; reinforced concrete floor; steam heat; electric light; lately noted. (See Machinery Wanted—Building Supplies, etc.)

Tex., Isabel —Radio Station.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., let contract to Jas. McCoy, Brownsville, Tex., to erect power-house and operators' quarters for radio naval station; power-house 32x32 ft.; concrete and brick; concrete roof and floor; operators' quarters 42x42 ft.; frame; shingle roof; frame floor; cost \$9500. (Lately noted.)

W. Va., Wellsburg —Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract to Colonial Construction & Supply Co., Inc., Charlottesville, Va., to erect postoffice; 2 stories and basement; 77x56 ft.; reinforced concrete, steel, brick and wood; composition and slate roof; wood and tile floor; steam heat; electric lights; cost \$40,000. Address contractor. (Lately noted.)

HOTELS

Fla., Boca Grande.—Gasparilla Inn let contract to Geo. A. Miller, Tampa, Fla., to erect 2 additions to hotel; screened porches; also erect pavilion 34x50 ft.; cost \$60,000.

Mo., Kansas City.—Neuer Bros. let contract at \$60,152 to Aiken & Thayer, 501 Sherkert Bldg., Kansas City, to erect hotel at 1416 Central St.; 3 stories; 77x113 ft.; brick and reinforced concrete; 200 rooms; Fred H. Michaelis, Archt., 113 McGee St. (Previously noted.)

MISCELLANEOUS

Ga., Thomasville —Shed.—Atlantic Compress Co. let contract to erect shed; iron; 200x60 ft.; contract for lumber to A. H. Williams, Thomasville.

Md., Baltimore—Toilet and Washhouse.—Bartlett Hayward Co. let contract to J. Henry Miller, Eutaw and Franklin Sts., Baltimore, to erect toilet and washhouse at Scott and McHenry Sts.; 2 stories; 24x11 ft.; brick; slag roof; cost \$4500.

Tenn., Knoxville—Billiard Parlor.—Edwin Akers let contract to Brimer & England Bros., Knoxville, to alter store building at 611 S. Gay St., for billiard parlor; tar and gravel roof; cost \$3000; John H. Ryan, Archt., Knoxville. (Lately noted under Stores.)

Tex., Waco —Grandstand.—Texas Cotton Palace Assn., S. N. Mayfield, Secy., let contract at \$4253 to W. J. Campbell, Waco, to erect grandstand; Milton W. Scott, Archt., Waco. (Lately noted.)

RAILWAY STATIONS, SHEDS, ETC.

S. C., Spartanburg.—Southern Ry. Co., W. H. Wells, Ch. Engr., Washington, D. C., let contract to John P. Pettyjohn & Co., Lynchburg, Va., to construct freight-station facilities; consist of inbound freighthouse; 1 story; 40x250 ft.; 2-story office section; brick; concrete floor; fireproof roof; rolling steel doors; also outbound freighthouse; 1 story; 22x250 ft.; frame; concrete floor and base; fireproof roof; also include 4 house tracks, capacity 32 cars; 4 team tracks, capacity 29 cars; teamways serving both warehouses and team tracks will be paved with vitrified brick; 20-ton Pillar crane for handling heavy freight. (Previously noted.)

SCHOOLS

Ala., Montevallo.—City let contract to W. E. Lively, Birmingham, to complete public school.

Ala., Montevallo.—Alabama Girls' Technical Institute, T. W. Palmer, Prest., has plans by W. T. Warren, Empire Bldg., Birmingham, and let contract to Smallman & Brice Co., Birmingham, for extension to gymnasium; 60x30 ft.; brick; tar and gravel roof; cost, without equipment, \$2500. (Lately noted.)

Ark., Ashdown.—School Board let contract to H. M. Westbrook, Ashdown, as foreman to complete school; ordinary construction; brick partition walls; tin roof; double floor; total cost \$30,000; B. Van Dyke, Archt., Ashdown. (Previously noted.)

D. C., Washington.—Catholic Sisters' College let contract to Chas. J. Cassidy Co., 715 Southern Bldg., Washington, to erect boilerhouse at 8th and Varnum Sts.; 2 stories; terra-cotta; cost \$4000; Murphy & Olmsted, Archts., 1413 H St. N. W., Washington.

Miss., Benton.—Trustees of Yazoo County Agricultural High School let contract at \$5600 to George Moore to erect dormitory; 112x36 ft.; frame; tin shingle roof; steam heat; electric lights; W. J. Campbell, Archt. (Lately noted.)

Mo., Webster Groves.—Loretto College let contract to John Crewe Construction Co., St. Louis, to erect building; 4 stories; 218x118 ft.; brick walls; concrete floors; cost \$185,000; also let contracts for heating to Elliott & Barry, and plumbing to J. Sheehan Plumbing Co., both of St. Louis; Barnett, Haynes & Barnett, Archts., St. Louis. (Lately noted.)

N. C., Rutherfordton.—City let contract to J. W. Campbell, Rutherfordton, to erect 6-room addition to school.

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S. C., Columbia.—School Board let contract at \$97,579 to Geo. W. Waring, Columbia, to erect high school at Washington and Marion Sts.; at \$5856 to American Heating & Ventilating Co., Richmond, Va., for heating; and at \$6135 to W. B. Guimarin & Co., Columbia, for plumbing; plans by Urquhart & Johnson, Columbia, call for fireproof structure; 168x130 ft.; rough texture Guigard brick trimmed with limestone; tin roof; reinforced concrete floors; tile partitions; manual training, domestic science, gymnasium equipment, etc. (Latey noted.)

S. C., Hemingway.—School Dist. No. 12 let contract to R. L. Gravelly, Florence, S. C., to erect school building noted in July; 6 classrooms, 36x40 ft. each, and auditorium, 60x75 ft.; brick; Barrett specification roof; hardwood floors; heating and lighting not decided; cost \$15,000; Jas. D. Benson, Archt., Charleston, S. C. Address J. M. G. Eaddy, Chrm. Trustees, Hemingway. (See Machinery Wanted—Water-works; Tank; Engine.)

S. C., Orangeburg.—Trustees, A. W. Summers, Secy. Treas., let contract to John S. Mitchell, Orangeburg, to erect high-school building; 119x58 ft.; ordinary brick construction; tile, pine and terrazzo floors; Barrett specification roof; fan-blast heat and ventilation; cost \$21,000; F. H. & J. C. Cunningham, Archts., Greenville, S. C.; contracts for mechanical equipment to be let later. (Latey noted.)

S. C., Sumter.—City let contract at \$23,750 to J. M. Harby, Sumter, to erect girls' high school; rough-texture brick furnished by Sumter Brick Works; terra-cotta trimmings; 107x105 ft.; 2 stories and basement; tin and slate roof; electric lights; J. Herbert Johnson, Sumter, and N. Gaillard Walker, Rock Hill, S. C., Archts. (Latey noted.)

Tex., Houston.—P. W. Horn, Supt. of Schools, let contract at \$3725 to N. C. Jensen to erect Harper School on Block 10; 4 rooms; frame; basement. (Latey noted.)

Tex., San Angelo.—Board of Education let contract at \$51,176 to Willeke Bros., San Angelo, to erect high school on Oak St.; 180x120 ft.; brick; gravel roof; wood floor in classrooms; cement on halls; electric wiring; cost \$50,000; steam heat, \$5500; also let contract at \$13,400 to Bollenger & Petty, San Angelo, for plumbing, and at \$499 to Bullock Electric Co., San Angelo, for wiring; Ross & Cason, Archts., Waco, Tex. Address Contractors. (Latey noted.)

Va., Green Bay.—Leigh Dist. School Board let contract to Mr. Halley to erect school building; 2 stories; 6 rooms and auditorium; brick; slate roof; rift pine floor; cost \$7600; jacketed stoves \$300; plans by contractor; construction begun. (Previously noted.)

Va., Marye.—Berkley Dist. School Board let contract to Chas. and W. Hockaday to erect addition to school.

STORES

Ark., Argenta.—Justin Matthews let contract to L. Collamore, Little Rock, to erect building at 2d and Main Sts.; 2 stories; fireproof; pressed brick and reinforced concrete; tile and marble wainscoting; terra-cotta pil-lowings; 7 store buildings; imitation marble and terra-cotta around plate-glass fronts; upper floor for 12 apartments and offices; cost \$75,000; Mann & Stern, Archts., Little Rock. (Noted in June.)

Fla., Tampa.—F. W. Walpole let contract to J. Oliver Curry, Tampa, to erect building on Manatee Ave. for 3 storerooms.

Ga., Atlanta.—E. H. Cone, Inc., let contract to W. P. Travers, Atlanta, to alter building at 61 Peachtree St.; cost \$8250.

Ga., Atlanta.—Mr. McArthur let contract to C. W. Bernhardt, Atlanta, to remodel building at Whitehall and Mitchell Sts.; cost \$3800.

Ga., Fitzgerald.—Mrs. J. H. Ennis let contract to C. A. Austin, Ocilla, Ga., to erect building; lower floor for 4 stores; upper floor for apartments.

Ky., Hopkinsville.—E. W. Glass let contract to erect business building at 4th and Main Sts.; 35x60 ft.; 2 stories; brick; 2 stores on lower floor; upper floor for offices; French plate-glass front.

Ky., Lexington.—Buford Allen let contract to J. N. Merchant, Lexington, to erect apartment and store building at 251 N. Limestone St.; 2 stories; brick; F. J. Malley, Archt., Lexington.

La., New Orleans.—Jacob Pipitone is reported to have let contract to erect 1-story business building; cost \$1442.

N. C., Hertford.—T. R. Winslow let contract to J. A. Campbell, Edenton, to erect brick building.

Okla., Chandler.—A. B. Cunningham and Mrs. Clara Botkin let contract to erect 2 brick business buildings.

Okla., Bixby.—Adelman Hardware Co. let contract to J. C. Nance, Bixby, to erect store building on Main St.; 50x120 ft.; fireproof; 10-year tar and gravel roof; cement floor; gas heat and light; cost \$7000. (Noted in July.)

Okla., Frederick.—J. L. Lair, Prest. of First National Bank, let contract to A. H. Krause, Frederick, to erect 2 business buildings; 1 building 1 story, 50x140 ft., reinforced concrete; the other 1 story, brick, 50x80 ft.

Okla., Grandfield.—S. W. Saddler let contract to erect business building; 25x80 ft.; completion in 60 days.

S. C., Anderson.—Dr. A. P. Johnstone let contract to Chas. B. Pruitt, Anderson, to construct front in store occupied by Walter H. Keese; prism glass set in copper; verde antique marble base; tile vestibule floor; C. Gadsden Sayre, Archt., Anderson.

Tenn., Nashville.—Nashville Property Co. let contract to erect store and office building. (See Bank and Office.)

Tenn., Nashville.—Nashville Property Co. let contract to erect store and office building. (See Bank and Office.)

Tex., Galveston.—W. D. Haden let contract to remodel building at Market and 21st Sts. at cost of \$6000 to \$7000.

Tex., Midlothian.—R. W. Dillard let contract to erect business building; 40x115 ft.; owner will purchase materials, which include steel, marble, millwork, plaster, metal ceiling, plate glass, tiling, gravel roofing, etc.; brick purchased. (Latey noted.)

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Mobile.—Terminal Transfer & Storage Co., Capt. John Quill, Prest., will build yard tracks for 200 cars, besides switching connections to sundry railroads. Chas. G. Ollinger is V. P. and J. Holcombe Quill Secy. and Treas.

Ark., Bergman.—St. Louis, Iron Mountain & Southern R. R. (Missouri Pacific System) will, it is reported, spend \$40,000 for improvements and repairs between Bergman and Diaz, Ark. E. A. Hadley, St. Louis, Mo., is Chief Engr.

Fla., Panama City.—Atlanta & St. Andrews Bay Ry. has completed and put in operation an extension from Panama City to St. Andrews, 2 mi.

Fla., West Palm Beach.—E. P. Maule, contractor, has resumed work on construction of the Palm Beach & Everglades Ry., of which 22 mi. are to be built now. J. A. Moore is V. P. and Gen. Mgr.

Ga., Atlanta.—Adams & Sturm, contractors, of Columbus, O., have taken an option until Jan. 1 on the Atlanta-Carolina Electric Ry., on which some work has been done and which is projected from Atlanta to Augusta, Ga., about 180 mi. They may finance and build the road. R. E. Church of Atlanta is receiver.

Ky., Erlime.—The survey made for the Louisville & Nashville R. R. out of Erlime is for a short spur line, but its construction will probably not be authorized for some time. H. C. Williams, Louisville, Ky., is Ch. Engr. of Construction.

La., Lake Charles.—Krause & Managan Lumber Co. of Westlake, La., has let contract to W. J. Chastain of Lake Charles to build tram road 3½ mi. long, with 2 mi. of spur tracks, on timber land at Gillis.

Md. Thurmont.—Nothing is definitely decided upon, says Prest. W. L. Minick of the Chambersburg, Greencastle & Waynesboro Street Ry., concerning the discussed extension to either Thurmont or Emmitsburg, Md., 8 or 10 mi., but the plan is feasible.

Mo., St. Louis.—St. Louis Subway & Elevated Ry. Corp. is reported organized and charter will be asked by James D. Houseman and F. E. Niesen, Bank of Commerce Bldg.; James E. Hereford, Prest. Trust Co. of St. Louis County; Fred L. Kerth, St. Louis; R. S. England of Festus, Mo., and Spencer & Randolph, railroad engineers, 50 Church St., New York. Subway is planned from 2d and Mullanphy Sts. to Washington Ave., 19th St., Chestnut St., Lawton Ave., etc., to Cardinal St., going thence by elevated railway to Clark Ave., Duncan Ave., Taylor Ave. and Berthold Ave. to the city limits, making about 3¼ mi. of subway and 4¼ mi. of elevated line. Entrance would be afforded to proposed interurban railways, including the projected Kansas City line.

THEATERS

Okla., Sulphur.—J. D. Ramsey let contract to Ehman & Thomas to remodel theater on 2d St.; 50x55 ft.; brick; tar and gravel roof; wood floor; heat separate; electric light.

WAREHOUSES

Ga., Moultrie.—Dr. G. F. Taylor of Moultrie Oil & Fertilizer Co. let contract to Jas. Brown, Moultrie, to erect cottonseed meal and hull warehouse; brick.

La., New Orleans.—New Orleans Levee Board let contract to erect warehouse. (See City and County.)

N. C., Greensboro.—Revolution Cotton Mills let contract to C. F. Brown, employe of mill, to erect additional warehouse near city; 100x160 ft.; 4 or 5 stories; reinforced concrete; roof and floor same; electric light; cost \$30,000; Southern Engineering Co., Archt., Charlotte, N. C. Address owner; lately noted. (See Machinery Wanted—Elevators, Freight; Steel Sash; Glass.)

S. C., Newberry.—H. L. Parr let contract to P. F. Baxter, Newberry, to erect warehouse; 131x66 ft.; concrete and sheet iron; concrete floor.

Tex., Dallas.—D. E. Johnson, Denver, Col., let contract to W. C. Hedrick Construction Co., Dallas, to erect forwarding warehouse at Broom St. and Wesley Alley; 4 stories; 155x90.4 ft.; reinforced concrete; tar and gravel on cinder roof; concrete floor; gas heat; cost \$45,000; electric light \$1000; W. G. Davis, Archt., 317 North Texas Bldg., Dallas. (Latey noted.)

N. C., Durham.—Southern Ry. is expected to build some additional yard tracks and sidings at Durham. W. H. Wells, Washington, D. C., is Ch. Engr.

N. C., Newton.—Carolina & Northwestern Ry. will spend several thousand dollars near Newton to improve roadbed and alignment. L. T. Nichols, Chester, S. C., is Gen. Mgr.

N. C., Tipton.—Graham County Lumber Co. is reported to have offered to build a standard-gauge railroad from Tipton, on the Southern Ry., to Robbinsville, N. C., about 10 mi., if Graham county will vote \$50,000; cost of road to be \$150,000. Election on \$50,000 county bonds Oct. 12.

S. C., Charleston.—Gadsden Contracting Co. of Savannah, Ga., George M. Gadsden, Prest., has been awarded a 10-mi. contract on the Savannah end of the Charleston Southern R. R. Work will begin within 10 days. Estimated value of contract about \$400,000. W. R. Bonsal, People's Office Bldg., Charleston, is Prest. of the road. L. S.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Abattoir Equipment, etc.—J. E. Summer, Archt., Greenwood, S. C.—Catalogues and prices on abattoir and packing-house equipment.

Air Compressor, etc.—City Council, Clearwater, Fla.—Bids until Sept. 29 to furnish to Water-works Dept. an oil engine air compressor or a belt-driven air compressor and oil engine; further information obtainable on application to A. J. Brandon, Supt. Water-works Dept.

Automobile Repairs Equipment.—Vicente Santos Verdu, Havana, Cuba.—Data and prices on materials and equipment for automobile repairs.

Bag Machinery.—Pierre Mazyck, Columbia, S. C.—Data on manufacturing cloth bags and prices on machinery required.

Blankets (Woolen).—G. J. Teatson, 37 Rue de Termes, Athens, Greece.—Blankets of gray and white wool mixed, and borders reinforced; good quality, free from grease, with texture free from knots and inequalities after fulling, and no dog or other hairs,

Wood of Gaffney, S. C., is also reported to have been given a contract near Charleston, as is M. Schlitz of Charlotte, N. C., the latter being 12 mi. south. W. Z. Williams & Co., Fourth National Bank Bldg., Macon, Ga., will fill in temporary trestles for 2 mi. south of Ashepoo River and 2 mi. north of Edisto River.

Tex., Lamesa.—Financing is reported arranged for the railroad proposed by W. L. Carwile of Dallas and T. J. O'Donnell of Sweetwater, Tex., from Lamesa south to Midland, Tex., about 55 mi. Miles Westbrook of Dallas is also mentioned as interested.

Va., Chester.—Preliminary surveys for the Chester & City Point Electric Ry. are about completed and construction contracts will soon be closed. A. C. Buchanan, Chester, is Secy.

Va., Petersburg.—Norfolk & Western Ry. will double-track with company forces 7 mi. of its City Point branch from Petersburg to Hopewell and will also build a yard at the junction with the main line. J. E. Crawford, Roanoke, Va., is Ch. Engr.

W. Va., Fayetteville.—Survey has begun for the projected electric railway from Fayette Station to Oak Hill and Beckley, 35 mi. H. G. Scott, Gen. Mgr. Virginian Power Co., Charleston, W. Va., and others are interested.

W. Va., Madison.—Pond Fork Ry. Co. of Huntington, W. Va., capital \$25,000, is chartered to build a line from Madison up Pond Fork of Coal River to its head, about 25 mi.; incorporators, R. M. Baker, Herbert Fitzpatrick, J. William Hagen, Jr., George Garred and F. B. Enslow of Huntington.

STREET RAILWAYS

Fla., Jacksonville.—Petition has been filed with the City Council to require the Jacksonville Traction Co. to extend its lines from Myrtle Ave. out Kings Rd. to the city limits. Hardy Croom is Mgr.

La., New Orleans.—New Orleans Ry. & Light Co. may build an extension of the South Claiborne Ave. line from Broadway to Carrollton Ave. D. D. Curran is Prest.

La., Shreveport.—Shreveport Traction Co. is granted franchise to double-track the Highland Ave. fair grounds line from Marshall St. to Creswell St. on Stoner Ave., and from the latter to the end of Herndon Ave. W. F. Dillon is Prest. and W. A. Sullivan Gen. Mgr.

Tex., Dallas.—Miller & Stemmons have been authorized to build street railway ¼ mi. from Meridian Rd. to Brooklyn St., this to connect Sunset Summit with the Dallas Consolidated Electric Street Ry.

W. Va., Parkersburg.—Kanawha Traction & Electric Co. is preparing to double-track line from Pottery Junction to 12th St. via 19th St. S. D. Camden is Prest.

or cotton texture; to stand various tests, including (1) absorbing paper, (2) precipitation in distilled water, (3) not to change color after being in distilled water 24 hrs., (4) 5 minutes treatment in boiling water, (5) treatment in boiling solution of 3 per cent. salt for 5 minutes, also color not to change after 50 to 60 hours exposure to sun; weight 3000 to 3500 grams; sizes, 2M 30 centimeters, 2M 40 centimeters, 1M 75 centimeters, 1M 80 centimeters; other requirements include Greek lettering and royal crown in center of blanket.

Bleaching Machinery.—See Cotton Machinery.—Planters' Oil Mill & Gin Co.

Boiler.—W. M. Plummer, 224 9th St. S. E., Washington, D. C.—40 or 50 H. P. internally-fired Scotch steam boiler; second-hand; good condition.

Boilers.—Greensboro Supply Co., Greensboro, N. C.—Specifications and lowest prices on 6 or 8 horizontal return tubular boilers, 72 in. by 18 ft., 150 H. P. each, good for at least 125 lbs. working pressure. (Previously noted.)

Bricks, etc.—Bond Trustees, South Jacksonville, Fla.—Bids until Sept. 18 to furnish 2,500,000 No. 1 vitrified paving brick and 50,000 lin. ft. granite curb; for further information address Bond Trustees; J. R. McCrary Co., Engr., 108 Third National Bank Bldg., Atlanta, Ga.

Brick (Tapestry).—Raleigh James Hughes, 513-514 Banner Bldg., Greensboro, N. C.—Prices on Fisklock tapestry brick.

Bridge Construction.—See Road Construction, etc.—State Roads Com.

Bridge Design.—City of Cedartown, Ga. Wants designs for concrete bridge; span of about 60 ft., width 30 ft., height 8 ft. above low water; information obtainable from H. N. VanDevander, City Engr.

Building Materials, etc.—Bert C. Overton, Archt., Okmulgee, Okla.—Prices on crushed stone, sand, lime, cement, plaster, steel and metal ceilings, elevator, dumbwaiter.

Building Materials.—J. F. McClure, Jr., 211 Webb St., Anderson, S. C.—Veneer, brick, tile, for hardwood floors and interior work; also slate or tile roof.

Builders' Supplies.—J. S. Wilson, Bailey, N. C.—Correspondence with manufacturers of builders' supplies.

Building Supplies, etc.—Richardson Engineering & Constructing Co., Bainbridge, Ga.—Cement, common brick, plaster, sand and gravel, millwork, metal lath, structural steel.

Building Materials.—See Metal Lath, etc.—Dept. of Justice.

Building Material, etc.—Leonard D. Long, Orlando, Fla.—Composition roof, electrical fixtures, finish hardware, stock doors and windows for \$3800 dwelling; samples desired.

Buttons.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Sept. 28 on 5000 gross white bone buttons, schedule 8776, delivery Charleston, S. C.

Cable.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Sept. 28 on 50,000 ft. high-frequency cable, schedule 8770, delivery Washington.

Cable, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Sept. 16 to furnish electric cable, steel cable, Swedes-iron rope, wire, tool steel, galvanized steel, spring steel, drill rods, cast iron snubbing posts, chain, manganese bushings, soil pipe, pipe fittings, 8 traps, valves, cocks, cock hole covers, shower heads, waste strainers, cleanouts, basin plugs, flush pipe holders, closet pulls, files, drills, taps, reamers, pipe tongs, wrenches, tallow pots, engine lubricators, window glass, oil hose, magnesia pipe covering, pipe-thread compound, blasting caps, detonators, safety fuse, Bristol board, copying books, paper, lumber and cross-ties; blanks and general information relating to this circular (No. 964) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Canning Machinery.—Eureka Canning Co., Lorain A. Kerr, Pres., Cheraw, S. C.—Interested in prices on machinery for canning tomatoes, sweet potatoes, etc.

Cars (Tank).—Pennsylvania Equipment Co., 1438 S. Penn Sq., Philadelphia, Pa.—To lease a few 6000 or 8000 gal. tank cars for six to twelve months for shipping tannic acid.

Cement.—See Electrical Equipment, etc.—Chas. W. Harper.

Cement.—H. B. Mehring & Co., 239 N. George St., York, Pa.—Names and addresses of manufacturers of Diamond disc cement and Gardeners disc cement.

China ware, etc.—I. Rhodes, care of Tutweiler Hotel, Birmingham, Ala.—Correspondence (for wholesale crockery business) with manufacturers of: Enamel; glass; tin; china and earthen ware; knives, forks and spoons; hotel, kitchen and dining-room ware; combination gas and oil ranges; lamps; fireworks; toys; stationery (for country schools); pencils, ink, etc.; jewelry; paper bags of all sizes; novelties; all of low price, and suited for country stores, "5 and 10-cent" stores and "Racket" stores. Send illustrated catalogues or samples, and quote net prices f. o. b. Birmingham.

Concrete Pool.—Committee on Public Works, S. C. Harrison, Jr., Chrmn., City Engineer Bldg., Main and Orange Sts., Jacksonville, Fla.—Bids until Sept. 27 to construct reinforced concrete swimming pool about 100x10 ft. and ranging in depth from 4 to 10 ft.; plans and specifications furnished by Commrs. of Public Works, Engineer Bldg.

Concrete Tank.—International Crude Oil Storage Co., 415 Berryhill Bldg., Sapulpa, Okla.—Will open bids Nov. 10 on 55,000-bbl. fireproof underground storage tank for oil; tank 30 ft. deep, 114½ ft. across, with reinforcing rods 2 ft. apart horizontally and 1 ft. apart perpendicularly; wall, top and floor to be 6 in. thick; roof slabs 20 ft. 3 in. and supported at each intersection of concrete beams with 18-in. concrete columns.

Dryers.—See Presses (Cotton), etc.—New Orleans Pickery Co.

Cotton Machinery.—Planters' Oil Mill & Gin Co., Kosciusko, Miss.—Equipment to clean and bleach cotton linters and delint for powder purposes; daily capacity 50 bales.

Cotton (Sewing).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Sept. 28 on 1800 cones white sewing cotton, schedule 8776, delivery Charleston, S. C.

Cotton Machinery.—Sylvan Cotton Mills, Shelbyville, Tenn.—40-in. 2-beater breaker lapper with hopper feed; 40-in. 2-beater finisher lapper; 9 revolving top flat cards with 12-in. collers; 20 to 24 deliveries

tem, switchboard and transformers. (See Water and Electric-Light Systems.)

Electric Motor.—Grainger & Co., Louisville, Ky.—A. C. 3 phase electric motor; new or second-hand.

Electric Motor.—F. P. Hudgins, 16 E. Marshall St., Richmond, Va.—15 H. P. motor, D. C., 500 volts. (See Pulleys and Shafting, etc.)

Electric Motor.—J. F. McClure, Jr., 211 Webb St., Anderson, S. C.—Electric motor.

Electric Wiring.—Board of Education, A. A. Bumgarner, Chrmn. Bldg. Committee, Tulsa, Okla.—Bids until Sept. 20 for electric wiring required in erection of 2 unit buildings on Kirkpatrick Heights addition; specifications on file with Supt. of Schools.

Electrical Equipment, etc.—Chas. W. Harper, Engr., Yancy Light & Power Co., Burnsville, N. C.—Prices on following for water-power plant construction: Cement; reinforcing steel; ½-yd. concrete mixer with power; horizontal water-wheel, 110 H. P. at 27-ft. head, with governor; 175 K. V. A. generator, 60-cycle, 2300 volts, 300 R. P. M., with exciter and switchboard; transformers, 2300 to 11,000 volts; transmission line fixtures, etc.

Electrical Fixtures.—Leonard D. Long, See Building Material, etc.

Electrical Fixtures.—Jas. F. McClure, 211 Webb St., Anderson, S. C.—Electrical fixtures for 8 and 5-room dwellings.

Elevators.—See Building Materials, etc.—Bert C. Overton.

FOR the benefit of business concerns, engineers, contractors, machinery manufacturers, dealers and others who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

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of drawing, 12-in. collers; 6x12 slubber; six 3x4½ speeders; 10 spinning frames, 3 to 3½-in gauge, 2-in. rings, 7-in. travers; warper; 50 36 to 40-in. automatic looms; must be first-class condition.

Crushing and Pulverizing Machinery.—See Grinding Machinery.—H. E. De Jarnette.

Dam Construction, etc.—Granite Falls Mfg. Co., Granite Falls and Hickory, N. C.—Soon invite bids to build 45-ft. dam and change present equipment to electric power throughout cotton mill; estimated cost \$40,000.

Delinting Machinery.—See Cotton Machinery.—Planters' Oil Mill & Gin Co.

Dumbwaiters.—See Building Materials, etc.—Bert C. Overton.

Drainage.—Cook Slough Drainage Dist., Jackson County, Newport, Ark.—Bids until Oct. 6 to construct about 164,000 cu. yds. main ditch and 81,000 cu. yds. lateral excavation near Swifton; small dredge boat, or drag line and team work; Ferdinand Toney, Secy., Swifton; W. A. Bowman, Engr., Remmel, Ark.

Earthwork.—U. S. Engr. Office, Queen and Crescent Bldg., New Orleans, La.—Bids until Sept. 28 to construct 1,093,400 cu. yds. earthwork in Lower Tensas and Atchafalaya Levee Dists.; information on application.

Electric-Light System.—Mayor and Board Commrs., Lumberton, N. C.—Bids until Oct. 12 on electric-light system, including about 6 mi. 220-230-volt primaries and secondaries, series tungsten street-light sys-

Elevators (Freight).—Revolution Cotton Mills, Greensboro, N. C.—Two freight elevators; 8x10 ft. each; capacity about 3500 lbs.; shaft 4 floors.

Emery Cloth.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Sept. 28 on emery cloth, schedule 8773, delivery Norfolk and Philadelphia.

Engine (Gas).—J. M. G. Eaddy.—See Water-works.

Engine (Oil).—See Air Compressor, etc. City Council, Clearwater, Fla.

Engines (Oil).—J. S. Wilson, Bailey, N. C.—Correspondence with manufacturers of oil engines.

Excavation.—Pitzman's Co. of Surveyors and Engineers, 615 Chestnut St., St. Louis, Mo.—Bids until Sept. 23 for 600,000 cu. yds. excavation for University Park Realty Co.; average haul, 900 ft.; work may be divided into 6 parcels. Address Pitzman's Co. for specifications.

Feed Mills.—See Grinding and Mixing Machinery.

Ferrules (File).—See Handle Machinery.—Lee & Eastwood.

Files.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Sept. 28 on files, schedule 8773, delivery Charleston, Norfolk, Philadelphia.

Fuller's Earth Machinery, etc.—H. A. Edwards, Weldon, N. C.—Data on development of fuller's earth, including processes of refining, markets and prices on machinery.

Furniture (Office, etc.).—F. P. Hudgins, 16 E. Marshall St., Richmond, Va.—

Prices on office furniture; drawing-room furniture; describe and state make.

Glass.—Revolution Cotton Mills, Greensboro, N. C.—Window glass for warehouse 100x160 ft.; 4 or 5 stories.

Glassware.—G. J. Tsatsos, 37 Rue de Hermes, Athens, Greece.—Interested in glassware; view to representation. Send catalogues.

Granite Curb.—See Bricks, etc.—Bond Trustees, South Jacksonville, Fla.

Gravel.—Perry County Commrs., Marion, Ala.—Bids until Oct. 1 to furnish 700 cu. yds. clay-gravel to be used in surfacing part of Marion and Uniontown Rd.; W. L. Pitts, Probate Judge; W. S. Keller, State Highway Engr., Montgomery.

Grinding and Mixing Machinery.—C. L. Morris, Box 283, Murray, Ky.—Correspondence with manufacturers of machinery for grinding and mixing baled hay.

Grinding Machinery.—H. E. De Jarnette, care De Jarnette, Downey & Dangerfield, Princeton, W. Va.—Prices on machinery for lime-grinding plant, including stone crusher, pulverizer, etc.

Handle Machinery, etc.—Lee & Eastwood, 601 Times-Dispatch Bldg., manufacturers' representatives, Richmond, Va.—Automatic machinery for making file handles; also wants to correspond with manufacturers of ferrules for file handles.

Heating Plant.—Bureau of Standards, 300 South Bldg., Washington, D. C.—Bids until Sept. 14 to install direct-radiation heating system in North Bldg. of Bureau; plans and specifications obtainable upon depositing \$5 with Dunn & Deming, Archts., 808 17th St.

Heating (Steam).—J. F. Knapp, Morehead, Ky.—Steam-heating equipment for business block and opera-house.

Hose, Packing, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Oct. 4 to furnish hose, packing, rubber valves, gaskets, magnesia pipe covering, brushes, chain, tackle and snatch blocks, shovels, tool handles, gasoline and locomotive torches, copper and red rubber tubing, steel tapes, soft steel, auger bits, wire nails, brass and copper wire, hinges, hasps, screws, bolts, cylinder and reducing valves, leather belting, belt lacing, boiler lagging, water-closet tanks, wheelbarrows, bronze, brass, sheet lead, tin, window glass, candle wicking, locks, etc.; blanks and general information relating to this circular (No. 969) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Ice Machinery.—E. L. Holloway, care Kingsdale Lumber Corp., Lumberton, N. C.—Prices on 10-ton ice plant.

Ice Machinery.—Central Light & Power Co., H. E. Burnham, Mgr., Amite, La.—Prices on equipment for 6-ton ice plant.

Iron (Cast, Scrap).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Sept. 21 on 100 tons cast-iron, cast-scraper iron, schedule 8768, delivery Norfolk, Va.

Irrigation.—Jas. F. McClure, Jr., 211 Webb St., Anderson, S. C.—Data and estimates on overhead irrigation system for 5 acres farm land.

Knitting Machinery.—Electrical Utilities Exchange, J. H. Kuhns, Mgr., Omaha, Neb.—Data and prices on machinery to manufacture artificial leather; second-hand, in good condition, will do; for export to Japan.

Laundry Machinery.—D. J. Phipps, Box 533, Beckley, W. Va.—Prices on laundry equipment (for jail.)

Leather (Artificial) Machinery.—Electrical Utilities Exchange, J. H. Kuhns, Mgr., Omaha, Neb.—Data and prices on machinery to manufacture artificial leather; second-hand, in good condition, will do; for export to Japan.

Locomotive.—Long Branch Coal Co., L. Graney, Gen. Mgr., Long Branch, W. Va.—Second-hand saddle-tank steam locomotive, 12 or 13 tons, track gauge 21 in.; good condition. State price, make and location.

Locomotive.—Pennsylvania Equipment Co., 1438 S. Penn Sq., Philadelphia, Pa.—18x24 or thereabout Mogul type locomotive; between 40 and 55 tons.

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Lumber.—Richland County Commrs., A. Patterson, Jr., Supvr., Columbia, S. C.—Bids opened Sept. 17 to furnish 7500 ft. long-leaf pine lumber for bridge f. o. b. Congaree, S. C.

Lumber.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 5 on lumber, schedule 8783, as follows: White ash, white oak, and yellow pine, various deliveries; basswood and yellow poplar, delivery Philadelphia; 8000 ft. long and 32,000 ft. cedar (boat builders' use), delivery Boston; Port Orford cedar, delivery Mare Island and Portsmouth; 128,000 ft. white cedar and miscellaneous boat-building cypress, delivery Philadelphia, Boston and Norfolk; Louisiana red cypress, and North Carolina pine, delivery Norfolk; Douglas fir, delivery Charleston, Boston, Portsmouth and Norfolk; 1000 ft. common hickory, delivery Puget Sound, Wash.; 6000 ft. laurel and miscellaneous mahogany, delivery Mare Island, Cal.; redwood, delivery Boston, Charleston and Brooklyn.

Lumber, etc.—G. W. Hubbard, Supt., Electric Light & Water Plant, Madison, Ga. Prices on cypress lumber to build tank of about 20,000 gals. capacity; also valves and pipe fittings.

Machine Tools, etc.—See Automobile Repairs Equipment.—Vicente Santos Verdu.

Machine Tools.—Greensboro Supply Co., Greensboro, N. C.—Specifications and lowest prices on 24x39-in. iron-working planer; 18-in. to 24-in. swing engine lathe, with bed at last 24 ft. long; 18-in. to 24-in. swing crank chaper; small engine lathe; radial drill press, about 4-ft. swing. (Lately incorrectly noted.)

Machine Tools.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Oct. 5 on two 21-in. upright drills, two 12-in. double emery grinders, two screw-cutting engine lathes, and two 16-in. crank shapers, schedule 8782, delivery Boston and Philadelphia; two 18-in. by 8-ft. geared head lathes, 16-in. by 6-ft. geared head lathe, 12-ft. (metal) boring and turning mill, and turning press, schedule 8780, delivery Washington; 24x36 turntable lathe, schedule 8781, delivery Boston.

Machine Tools, etc.—F. P. Hudgins, 16 E. Marshall St., Richmond, Va.—Prices on lathe, about 36-in. swing; lathe, about 20-in. swing, quick-change gears; lathe, about 14-in. swing, suitable for threading worms from 3/4-in. to 1 1/4-in. pitch; toolroom lathe; planer, about 72 in. by 48 in. by 10 ft., 2 beds; shaper, 16 to 20-in. stroke; 2 or 3 drill presses (prefer one medium size multiple); turret lathe; pulley lathe; power hack saw; 12-in. emery stand and 2 wheels; 6-in. emery stand, 2 wheels; bolt threader; holding machine; worm milling machine; No. 2 or 3 milling machine; several vises; cold saw; taps, dies, drills, reamers, chain bolts, work benches and entire equipment for shop manufacturing machinery. Describe and state make.

Machine Tools, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Oct. 6 to furnish engine lathe, forcing press, bench filing machines, valve reseating outfits, bolt heading and forging machines, plate bending and straightening rolls, double-angle shear, plate planer, flanging clamp, pipe machine, hand lever punch, metal-cutting saw, drill press, journal bearings, machine bolts, grip nuts, wagon wheels, copper wire, copper, steel and brass tubing, globe valves, brass cocks, horseshoe nails, cant hooks, night latches, soap polish, manila tags, memorandum and record books, paper and creosoted lumber and piles; blanks and general information relating to this circular (No. 970) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 64 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Metal Lath.—Richardson Engineering & Constructing Co.—See Building Supplies, etc.

Metal Lath, etc.—Dept. of Justice, Office of Supt. of Prisons, F. H. Duchay, Washington, D. C.—Bids until Sept. 30 to furnish and deliver at U. S. Penitentiary, Atlanta, Ga., metal lath, furring, corner beads, sanitary trim and plastering materials for the lath, laundry and tailor shop building; specifications and information obtainable on application at office.

Metal-working Equipment.—G. L. McCullough, Box 306, Birmingham, Ala.—Ma-

chinery for manufacturing tin cans, buckets, etc.

Metals and Iron Goods.—Rag. Giuseppe Patrizio & Filo, Corso Vittorio Emanuele, 26, Milan, Italy.—Interested (as Importers) in prices on American metals and iron goods.

Millwork.—Richardson Engineering & Constructing Co.—See Building Supplies, etc.

Mining Equipment.—See Fuller's Earth Machinery.

Motors (Water).—J. S. Wilson, Bailey, N. C.—Correspondence with manufacturers of water motors.

Oils (Fish), etc.—See Tanning Barks, etc.—G. J. Tsatsos.

Oil Expellers.—Geo. J. Adams, 39 South St., corner Old Slip, New York.—Two oil expellers; Anderson preferred.

Oil (Sassafras) Machinery.—R. B. Lambert, Staunton, Va.—Machinery for manufacturing sassafras oil; to include grinders, tanks, etc.

Packing-house Machinery.—J. E. Summer, Archt., Greenwood, S. C.—Data and catalogues on packing-house equipment. (See Abattoir Equipment, etc.)

Paving.—R. L. Banks, City Clerk and Treas., Meridian, Miss.—Bids until Sept. 20 to pave section of 8th, 5th and Pacific Sts. and 26th Ave.; plans and specifications obtainable from J. C. Watts, City Engr.

Paving.—City of Derma, Miss., Hugh Taylor, Clerk, Mayor and Board of Aldermen. N. M. Crawford, Street Commr.—Bids until Oct. 5 to construct 1800 sq. ft. concrete sidewalks.

Paving.—Baltimore (Md.) Board of Awards, City Hall.—Bids until Sept. 22 to grade, curb and pave with sheet asphalt, under Contract No. 143, the Alameda from Harford Rd. to 110 ft. north of 28th St.; \$800 sq. yds.; specifications obtainable from Commrs. for Opening Streets, John L. Sanford, Acting Prest., City Hall, for \$5; plans and profiles on file with Commrs.

Paving.—City of Gaffney, S. C., W. H. Ross, Clerk.—Bids until Sept. 22 on about 3750 sq. yds. sheet asphalt, vitrified brick or cement concrete paving, 8 catch-basins complete, 575 ft. 12-in. storm sewer complete, 325 ft. 8-in. and 18-in. concrete curb and 650 cu. yds. grading; plans and specifications at office of City Clerk.

Paving.—Baltimore (Md.) Board of Awards, City Hall.—Bids until Sept. 22 to grade, curb and pave following streets with sheet asphalt or bituminous macadam, combination concrete curb and gutter or reinforced concrete paving, under Contract No. 144; Elliott Driveway from Frederick to Franklin Rd.; Upper Drive from Edmondson Ave. to Elliott Driveway; will require 18,800 sq. yds. sheet asphalt, 18,800 sq. yds. bituminous macadam, 24,000 sq. yds. reinforced concrete paving; specifications obtainable from Commrs. for Opening Streets, John L. Sanford, Acting Prest., City Hall, for \$5; plans and profiles on file with Commissioners.

Paving (Concrete or Brick) Materials.—Commrs. of Street Improvement, Dist. No. 1, Lake Village, Ark.—Bids until Sept. 25 to furnish following paving materials, if concrete pavement adopted: 2320 blbs. Portland cement, 2120 tons concrete stone and 925 yds. concrete sand; if brick pavement adopted: 272,000 paving brick, 1016 blbs. Portland cement, 920 tons concrete stone and 400 yds. concrete sand; specifications obtainable from J. B. McCrary Co., Engr., Atlanta, Ga., and Little Rock, Ark.

Pea Cleaners.—Thos. B. West, Prest. Security Loan & Abstract Co., Macon, Ga.—To correspond with manufacturers of ground pea cleaners.

Peanut Machinery.—Granbury Milling Co., Granbury, Tex.—Addresses of manufacturers of peanut machinery.

Pierie.—Edgar Franklin & Co., merchants and agents, 62-63 Basinghall St., London, E. C., Eng.—Interested in prices on pierie; offers to be accompanied by "Name and address of London firms of proper financial responsibility ready to guarantee deliveries, with power of attorney to sign contracts in a few hours' time; bank guarantee for payment in New York will be called." Cabled price are solicited.

Presses (Cotton), etc.—New Orleans Pickery Co., A. D. Brady, Secy., 824 Gravier St., New Orleans, La.—Receiving prices on electric presses; also dryers.

Pulleys and Shafting, etc.—F. P. Hudgins, 16 E. Marshall St., Richmond, Va. 100 ft. line shafting and couplings, hangers, pulleys and 15 H. P. motor, D. C., 500 volts. Describe and state make.

Plumbing.—Jas. F. McClure, 211 Webb St., Anderson, S. C.—Plumbing for 8 and 5-room dwellings.

Rails.—Thaw & Williams, Cincinnati, O.—Prices on first-class 40-lb. relayers, 35 to 40 tons, splice bars weighed in.

Ranges.—I. Rhodes, care of Tutweller Hotel, Birmingham, Ala.—Dealers' (wholesale) prices on ranges (combination gas and oil).—See Chinaware, etc.

Road Construction.—Clinton County Commrs., C. B. Parrigin, County Judge, Albany, Ky.—Will let contract about Oct. 15 for county road construction; F. S. Parrigin, Engr., Albany.

Road Construction.—Chalborne County Road Commrs., J. H. S. Morison, Chrmn., Cumberland Gap, Tenn.—Bids until Oct. 8 to grade and macadamize 103 mi. of road; specifications obtainable from C. R. Fulton, Secy., Harrogate, Tenn., or Mr. Morison at Cumberland Gap.

Road Construction, etc.—State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, Md.—Bids until Sept. 28 for following: Contract No. WO-11, Worcester county, concrete roadway from near Stockton toward Goodwill, 1.21 mi.; Contract No. C1-13-BR, Carroll county, reinforced concrete bridge (16-ft. span), girder construction, over Meadow Creek, along Meadow Branch turnpike, west of Westminster; Contract No. F-23, Frederick county, repointing walls and coping, Jug Bridge, over Monocacy River, along State Rd. east of Frederick; specifications and plans furnished by Com. for \$1.

Road Construction.—Northampton County, Eastville Dist. Road Board, W. L. Dalby, Secy., Eastville, Va.—Defers letting of contract till later date for construction 55 mi. sand-clay road; plans not ready. (Bids lately noted for Sept. 27.)

Road Machinery.—Isalah Brown, Box 31, Lebanon, Mo.—Interested (for city and county) in prices on 2 wheel scrapers and a road roller.

Roof (Composition).—Leonard D. Long.—See Building Material, etc.

Roofing.—See Building Materials.—J. F. McClure, Jr.

Seawall Construction.—Seawall Commissioners of Dist. No. 1, Hancock County, Chas. G. Moreau, Prest., Bay St. Louis, Miss. Bids until Sept. 29 to construct concrete sea wall on beach front from Ray St. Louis. Waveland dividing line to northeast line of Waveland Terrace; wall to be not less than 7500 ft. nor more than \$500 ft.; plans and specifications obtainable from Mr. Moreau at Bay St. Louis or from Chas. W. Shepard, 813 Union St., New Orleans.

Seating.—J. F. Knapp, Morehead, Ky.—See Theater Equipment.

Sewer Construction.—Julian Kendrick, City Engr., Birmingham, Ala.—Bids until Sept. 11 to construct sanitary sewers under Improvement Ordinance No. 879-C; specifications may be obtained and plans examined at office of City Engr.

Sewer Construction.—Sewerage Improvement Dist. No. 1, Lake Village, Ark.—Bids until Sept. 25 on following sewer materials: 126 tons concrete stone, 180 blbs. cement, 2400 lbs. reinf. steel, 4550 ft. 12-in., 12,000 ft. 18-in. and 750 ft. 14-in. terra-cotta pipe; 86 12x6-in., 22 12x6-in. and 314 8x6-in. Y branches; 42,000 lb. hard brick, 900 lbs. dry jute, 48 manhole rings, dustpans and rods, 14 flush tank rings and covers, 110 manhole steps, 14 flush tank syphons, 90 yds. concrete sand; specifications obtainable from J. B. McCrary Co., Engr., Atlanta, Ga., and Little Rock, Ark.

Sewer Construction.—Baltimore (Md.) Board of Awards, City Hall.—Bids until Sept. 22 to construct lateral sewers and house connections in Dist. No. 46-B, section No. 4 of Jones Falls interceptor and section No. 2 of Dist. 46; contracts Nos. 159, 160 and 161; contract No. 159 requires 36,000 lin. ft. 8-in. to 15-in. terra-cotta pipe sewer, 17,500 lin. ft. house connections. Sanitary contract No. 160—5800 cu. yds. earth excavation, 4600 cu. yds. rock excavation, 7000 lin. ft. 18-in. to 27-in. sewer. Sanitary contract No. 161—6000 cu. yds. excavation in trench, 1500 lin. ft. excavation in trench or tunnel, 4600 lin. ft. 18" to 33" sewer. Specifications and plans obtainable from Harry W. Rodgers, Secy., Sewerage Com., 904 American Bldg., for \$5; plans on file with Ch. Engr. of Sewerage Com.

Shears (Alligator).—Thaw & Williams, Cincinnati, O.—Prices and specifications on alligator shears, jaw opening to be not less than 10 in., and 2 ft. long; weight about 100 tons; arranged for motor drive. Give details, with price f. o. b. cars shipping point.

Stair Risers and Treads.—Roanoke Iron Works, Roanoke, Va.—Addresses of manufacturers of pressed steel risers and treads for stairways.

Steel Sash.—Revolution Cotton Mills, Greensboro, N. C.—Steel sash for warehouse 100x100 ft.; 4 or 5 stories.

Structural Steel.—Richardson Engineering & Constructing Co.—See Building Supplies, etc.

Tank.—J. M. G. Eaddy.—See Water works.

Tanks.—See Oil (Sassafras) Machinery.—R. B. Lambert.

Tanning Barks, etc.—G. J. Tsatsos, 37 Rue de Hermes, Athens, Greece.—Interested (view to representation) in chibroso, mimosa and chestnut; also fish oils and fats for tanning leather. Send samples and state lowest price with 5 per cent. commission.

Theater Equipment.—J. F. Knapp, Morehead, Ky.—Stage curtains and opera chairs for theater.

Testers (Syrup).—A. W. Sherwood, R. F. D. No. 4, McDonough, Ga.—Addresses of manufacturers of instruments for testing density of syrups, hot and cold.

Typewriter (Underwood).—F. P. Hudgins, 16 E. Marshall St., Richmond, Va. Second-hand Underwood typewriter.

Twine.—Postoffice Dept., Office of Purchasing Agent, Washington, D. C.—Bids until Sept. 22 to furnish 2,400,000 lbs. jute twine, 1,600,000 lbs. cotton twine, or twine made of other material suitable for tying packages of letters; also for tying devices to be used as substitute for twine, as may be required by postal service during term Nov. 1, 1915, to Oct. 31, 1916; specifications and proposal blanks furnished upon application to Purchasing Agent.

Valves and Pipe Fittings.—See Lumber, etc.—G. W. Hubbard.

Water and Electric-light Systems.—Mayor and Board Commrs., Lumberton, N. C.—Bids until Oct. 12 for water-works and electric-light system improvements; water-works consist of 2 concrete tub filters, brick house, concrete coagulating basin, all pipes and filter equipment and centrifugal pumps; electric system to include replacing present D. C. system with about 6 mi. 2200-230-volt primaries and secondaries, series tungsten street-light system, switchboard and transformers; specifications, forms, etc., obtainable for \$5 from Gilbert C. White, Engr., Charlotte, N. C., applicants to specify portion of work on which will bid; specifications on view at office Mayor and Engr.

Water System.—J. F. McClure, Jr., 211 Webb St., Anderson, S. C.—Water system for irrigation, house and stock use.

Water Wheel.—Chas. W. Harper, Engr., Yancey Light & Power Co., Burnsville, N. C. Prices on horizontal water wheel, 110 H. P. at 27-ft. head, with governor. Lately incorrectly noted under "Burnside." (See Electrical Equipment, etc.)

Water-works (Isolated) Supplies.—E. T. Hollingsworth, Lakeland, Fla.—Prices on gas engine pump and pressure tank for dwelling water supply.

Water-works.—J. M. G. Eaddy, Chrmn. School Trustees, Henningway, S. C.—Prices on water-works equipment for \$15,000 school building, including gas engine and tank.

Water-works Machinery.—Commrs. Water-works and Sewerage Improvements Dist. No. 1, Benton, Ark.—Bids until Sept. 28 on following machinery for water system: Two 100 H. P. high-pressure return tubular boilers with steel casing, cross flue and stack; 200 H. P. open-type heater; feed pump; two 500 G. P. M. underwriters' steam pumps; two 300-gal. vertical motor-driven centrifugal pumps; 300-gal. horizontal motor-driven centrifugal pump; 90 H. P. non-condensing uniflow engine; 60 K. V. A. generator for direct connection to above engine; switchboard and belt-driven exciter; specifications obtainable from Engr., J. B. McCrary Co., Atlanta, Ga., and Little Rock, Ark.

Well Drilling.—L. W. Wettermark, City Clerk, Pauls Valley, Okla.—Bids until Sept. 20 to drill and equip well system to supply 250,000 gals. water daily.

Woodworking Machinery.—See Hand-Handle Machinery.—Lee & Eastwood.

Woodworking Machinery.—F. P. Hudgins, 16 E. Marshall St., Richmond, Va. Prices on woodworking machinery, including jointer, about 16 in.; miter knife; combination rip and cut-off saw with boring attachment; band saw; planer or surfacer, about 24x6 in.; wood lathe; pattern-maker's vise and other wood shop supplies or equipment. Describe and state make.

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ark., Newport.—Mortgage Securities Co. of Newport is incorporated with \$153,000 capital. L. L. Campbell is Pres.; Vesther N. Yancey, V.-P., and D. A. Yancey, Secy. and Treas.

D. C., Washington.—The Northwest Savings Bank has begun business at Columbia Rd. and 18th St.; capital \$50,000. Dr. Geo. C. Havenner is Pres.; Guy T. Scott, 1st V.-P.; Maj. Frederick C. Bryan, 2d V.-P.; W. J. Neuland, Cash.; Edward F. Colladay, Gen. Counsel.

Fla., Jacksonville.—Effenbee Investment Co., capital \$10,000, and to conduct real estate business or any business "commonly carried on or undertaken by capitalists, promoters, financiers, contractors, merchants," etc., will apply for charter Oct. 14. Telfair Stockton is Pres.; Jay H. Durkee, V.-P., and George J. Arent, Secy. and Treas., they being also directors.

Fla., Orlando.—Real Estate Bank is to begin business Oct. 5. J. H. Tucker is Pres.; C. D. Christ and J. B. Mills, V.-Ps.; J. F. Ange, Director, and A. B. Cook, Cash.

Fla., Pensacola.—A new bank, probably to be called Fourth National Bank of Pensacola, is reported being organized by Col. W. W. Flournoy of De Funiak Springs, Fla., and W. W. Downing of Brewton, Ala., who have bought the First National Bank Bldg. and are about to remodel it, to begin business by Jan. 1. Capital \$500,000; surplus not less than \$100,000.

Ga., Ambrose.—The Merchants' & Farmers' Bank of Ambrose is reported organized.

Ga., Augusta.—The Southern Security Co. has made application for charter; capital \$25,000; petitioners, Carl Roller and Allen W. Jones.

Ky., Murray.—First National Bank of Murray is chartered. Capital \$25,000.

Ky., Paris.—The Agricultural Bank and the Bourbon Bank & Trust Co. are to be consolidated, the merger to take effect Jan. 1, 1916. It is stated that J. W. Davis, Pres. of the Agricultural Bank will be president of the new institution.

Ky., Stanford.—First National Bank of Stanford has taken over the State Bank & Trust Co., capital \$25,000, it is announced, and will close up its business and absorb the assets. Capital of the First National is \$50,000, surplus \$28,000. The State Bank & Trust Co. had deposits of \$75,000.

La., Plaquemine.—Iberville Building & Loan Assn. of Plaquemine, capital \$2,000,000, has filed charter. Dr. W. A. Holloway is Pres.; E. B. Schwing, First V.-P.; Louis B. LeBlanc, Second V.-P.; J. Ferdinand Hebert, Treas., and Jules A. Carville, Secy. and Atty.

Mo., Caruthersville.—First National Bank of Caruthersville, capital \$50,000, is approved.

Md., Hyattsville.—Prince George's Bank of Hyattsville has applied to the State Bank Commr. for authority to begin business; capital \$25,000; paid in surplus \$6250. Incorporators: Clarence J. Owens, Guy W. Laitmer, Albert E. Owens, Frank S. Henrichs, T. Howard Duckett, Brice Bowie and Hugh Phillips of Prince George's county, Md., and D. L. Rice, Winfield Jones and Robert F. Rose of Washington, D. C.

Okla., Enid.—Commonwealth Investment Co. of Enid, capital stock \$10,000, is chartered. Ineprts.: Stanley F. Horner and Carl Kruse of Enid, and W. M. Gardiner of Fairview, Okla.

Okla., Beaver.—First National Bank of Beaver is approved. Capital \$27,500.

S. C., Starr.—Planters' Bank of Starr is commissioned; capital stock \$10,000; petitioners, E. P. Vandiver and C. C. Jones.

Tenn., Darden.—Bank of Darden has begun business; capital \$7500; Asa Davis, Pres.; W. F. Boren, V.-P.; L. Berry Moore, Cash.

Tex., Forney.—Forney State Bank is authorized to begin business. Capital stock \$15,000. J. C. Reagin is Pres.; O. W. Reagin, Cashr.

Tex., Littlefield.—Littlefield State Bank, a new concern, is chartered; capital \$20,000; surplus \$2000. Began business Sept. 8. Directors: Arthur P. Duggan, Pres.; O. L. Slaton, V.-P.; Rube S. Beard, Cash.; John O. James and A. A. Childers.

Tex., San Saba.—City National Bank, capital \$100,000, is chartered and will begin business about Oct. 1, succeeding the firm of Ward, Murray & Co. Incorporators: T. A.

Murray, Pres.; R. W. Burleson, Cashr.; J. L. F. Fentress, T. C. Henry and J. T. McConnell.

Tex., Texline.—First National Bank of Texline, capital \$25,000, is approved. Ineprts.: G. G. Wright, Jr., Johnson Allen, O. C. Downing, C. S. Bingham and J. E. McAvoy.

Va., Hopewell.—Hopewell Finance Corporation, Inc., capital \$500 to \$5000, is to conduct real estate business. G. H. Penn is Pres. and H. O. Mosher, Secy., both of Hopewell.

W. Va., Huntington.—Huntington Building and Loan Assn., capital \$100,000, has begun business. P. H. Medley, W. E. Minter, C. W. Campbell and others are incorporators.

NEW SECURITIES

Ark., Pocahontas.—\$12,000 of bonds of Big Running Water Drainage Dist. have been sold at 100.5 to St. Louis purchasers.

Fla., Bronson.—\$50,000 of 6 per cent. Levy county, Dist. 1, road and bridge bonds have been bought by Gunter & Sawyers, Jacksonville, Fla., and Little Rock, Ark.

Fla., Clearwater.—Steps are being taken to place on the market \$12,000 6 per cent. 25-year Ozona Dist., Pinellas county, school bonds. Dixie M. Hollins is Secy. Board Public Instruction.

Fla., Deland.—\$12,500 of 5 per cent. bonds of school district 14, Volusia county, for which bids were rejected May 10, are reported sold to Gunter & Sawyers of Jacksonville, Fla., and Little Rock, Ark.

Fla., De Land.—Bids will be received until noon Oct. 11 for \$400,000 of 6 per cent. 30-year \$1000 denomination bonds of Halifax Special Road and Bridge Dist. of Volusia county. Saml. D. Jordan is Clerk County Commrs. Further particulars will be found in the advertising columns.

Fla., Jacksonville.—A special dispatch to the Manufacturers Record says that the \$500,000 of 5 per cent. 30-year bonds of special tax school district No. 1 of Duval county, offered Sept. 11, have been sold to Weil, Roth & Co. of Cincinnati at a premium of \$13,816.50. F. A. Hathaway is Supt. of Public Instruction.

Fla., Kissimmee.—Bids will be received until 7.30 P. M. Sept. 25 for \$27,500 paving and debt bonds, 6 per cent. serial; denomination five of \$5000 each and one of \$2500. Address J. R. Gilbert, City Clerk.

Fla., Live Oak.—\$70,000 of 5 per cent. 30-year, denomination \$500, bonds of special tax school Dist. No. 1 of Suwannee county are reported sold to the First National Bank of Live Oak at 103. L. S. Albritton is Chrmn. Board of Public Instruction.

Fla., Marianna.—Special election will be called to vote on \$17,000 of municipal ice-plant bonds. A popular vote gave a large majority for the call, but freeholders only will vote at the special election. Address The Mayor.

Fla., Miami.—Hallandale School Dist. of Dade county has voted \$15,000 of school-building bonds. Address Supt. of Education.

Fla., Miami.—Dade county school bonds have been sold thus: \$12,000 Larkins Dist. to the First National Bank of Miami at \$12,010 and accrued interest; \$25,000 Silver Palm Dist. to the Miami Bank & Trust Co. at \$25,078.75 and accrued interest.

Fla., Miami.—W. B. Moore, City Clerk, says that the \$91,000 of 5½ per cent. street and sewer-improvement bonds purchased by the William R. Compton Co. of St. Louis were sold at private sale at the same price as the \$100,000 funding bonds, also bought by them, and on which a premium of \$1,377.77 was paid.

Fla., Miami.—Petition is filed and will be granted, it is stated, for election Oct. 16 on \$275,000 of Miami-Marco road bonds, Dade county. S. A. Belcher is Chrmn. County Commrs.

Fla., Ocala.—A dispatch to the Manufacturers Record says that the Commercial Bank of Ocala has purchased the entire issue of Marion county validated 6 per cent. warrants, aggregating \$110,000, at par.

Fla., Palatka.—Election Sept. 14 on \$208,000 5 per cent. road and bridge bonds of Putnam county; also \$25,000 road and \$25,000 drainage bonds of Bostwick Dist. of Putnam county. Henry Hutchinson is Clerk of Court at Palatka and D. P. Hancock is Chrmn. of the Drainage Board.

Fla., Sanford.—\$75,000 of Seminole county school bonds have been voted. Address Superintendent of Public Education.

Fla., Sanford.—\$250,000 of road and \$5000 of school bonds, says a dispatch to the Manufacturers Record, have been voted by Semi-

nole county. About Oct. 1 they will be advertised for sale. L. P. Hagan, Chrmn. County Commrs., or George A. Decottes, County Atty., can give full information. Bonds are 5½ per cent, 30-year.

Fla., Titusville.—Bids will be received until 2 P. M. Oct. 4 by J. F. Mitchell, Clerk Brevard County, for \$15,000 6 per cent. road and bridge district bonds.

Ga., Augusta.—\$250,000 of 4½ per cent. 30-year \$1000 denomination city levee-construction bonds will be sold at noon Oct. 6. Address Wm. Lyon Martin, Clerk of Council. Further particulars will be found in the advertising columns.

Ga., Menlo.—Bids received Sept. 11 for \$8000 5 per cent. 30-year school-district bonds. Address J. R. Wyatt, Secy. Board of Education.

Ky., Albany.—The \$50,000 of bonds voted by Clinton county are for building through it part of the Dixie Highway. Address W. B. Parrigin, County Judge.

Ky., Louisville.—Official denial is made of the report that an election would be held in November on \$350,000 sewer and disposal plant bonds. No such issue is proposed.

Ky., Ludlow.—Bids will be received until Oct. 28 for \$30,000 of 5 per cent. 20-year \$500 denomination school-building bonds which were voted May 1. W. R. Cullen is City Clerk.

Ky., Paducah.—Election is to be held Nov. 2 to vote on \$300,000 4½ per cent. 30-year \$500 denomination bonds for construction of trunk-line sewers. Address D. P. Marton, Commr. of Finance.

La., Alexandria.—\$250,000 of 5 per cent. \$1000 denomination bonds of the Red River, Atchafalaya & Bayou Boeuf Levee Dist. have been sold to the Ithieria Bank & Trust Co. of New Orleans at a premium of \$310.

La., Bogalusa.—It is contemplated to issue \$200,000 of water, sewer and light bonds. Address The Mayor.

La., Lafayette.—Election Oct. 2 on \$34,000 of 28-year drainage bonds, denomination \$100. Address Police Jury.

La., Lake Charles.—Election will be held Oct. 8 on \$125,000 of 5 per cent. 37-year serial high-school site and building bonds of the city of Lake Charles; denomination \$1000. Bonds to be sold at not less than par. Date for bids not yet fixed. E. F. Gayle is Pres. Board of Education.

La., Lafayette.—Bids reported received by Police Jury for \$25,000 bonds of Fifth ward road district as follows: First National Bank and the Bank of Broussard, par and accrued interest; People's Bank & Trust Co., par less \$2000. Award not announced.

Miss., Jackson.—Bids will be opened Oct. 4 by the Board of Supervisors of Hinds County at Jackson for 6 per cent. school bonds thus: \$4000 Tinnin Dist.; \$5000 Pocahontas Dist.; \$5500 Clinton Dist. Address W. W. Downing, Clerk. Further particulars will be found in the advertising columns.

Miss., Meridian.—Lauderdale county has received payment from C. W. McNear & Co. of Chicago in the sum of \$51,926 for \$49,500 of 5½ per cent. 25-year road bonds and accrued interest.

Miss., Ripley.—Bids for \$13,000 of 6 per cent. school bonds will, it is reported, be received at any time. H. R. Spight is City Clerk.

Mo., Carthage.—Election Sept. 14 on \$100,000 Jasper county bonds for tuberculosis hospital. Address J. C. Ross.

Mo., Jefferson City.—Special election on \$150,000 of Cole county bonds is called for Oct. 19, proceeds to be used thus: \$100,000, roads; \$25,000, county jail; \$25,000, tuberculosis sanitarium. Address County Commrs.

Mo., Seymour.—\$30,000 road-improvement bonds are voted. Address Road Commrs.

Mo., Washington.—\$60,000 of water-works purchase and improvement bonds have been voted and \$53,000 will be sold soon, interest not over 4½ per cent., maturity in 5 to 20 years; denomination \$100 and \$500. Bankers owning present water-works have offered to take the entire issue at par. Not yet sold. Address P. F. Peltz, Mayor.

Mo., Webb City.—Defeated: \$8000 city hall improvement bonds.

N. C., Durham.—\$40,000 of sewer-improvement bonds are to be sold when legal conditions are met. Address The City Attorney.

N. C., Gastonia.—A dispatch to the Manufacturers Record says that Gaston county has sold to J. H. Hillman & Co. of Atlanta, Ga., \$150,000 of 5 per cent. 30-year \$1000 road and refunding bonds at \$151,517.55. A. J. Smith is County Clerk.

N. C., Lumberton.—Weil, Roth & Co. of Cincinnati have been awarded at a premium of \$350 the \$45,000 of 5½ per cent. serial bonds recently voted and offered. They are \$25,000 light and water and \$20,000 high schools; denomination \$500 or \$1000; dated Oct. 1, 1915. G. T. Page is Treas.

N. C., Robbinsville.—Election Oct. 12 on \$50,000 of 5 per cent. 20-year Graham county bonds to aid construction of the Graham County R. R. from Topton to Robbinsville. J. A. Styles is Chrmn. and M. T. Crisp, Clerk County Commrs.

N. C., Raeford.—\$30,000 of water and sewer bonds are reported sold. Address The Mayor.

N. C., Shelby.—Election is to be held Oct. 16 on \$30,000 of 6 per cent. road bonds for No. 3 township of Cleveland county. Address J. J. Lattimore, Clerk to County Commissioners.

Okla., Ada.—The expected call for an election on bridge bonds was not made by the Pontotoc County Commissioners, and they do not expect to hold it this year. A. L. Miles is County Clerk.

Okla., Bartlesville.—It is expected that the \$50,000 of 5 per cent. bonds lately noted (for park \$43,500 and incinerator \$6500) will be offered for sale about Oct. 15. C. A. Lamm is Mayor and John Johnston, Finance Commissioner.

Okla., Bixby.—Election is to be held in Bixby township, Tulsa county, to vote on \$20,000 road bonds. Address County Commrs. at Tulsa.

Okla., Checotah.—R. J. Edwards of Oklahoma City bought the \$20,000 of 6 per cent. city hall, fire and jail bonds recently sold at 101.655 and interest.

Okla., Grove.—\$10,000 of 6 per cent. 10-year, \$500 denomination, electric-light and water-extension bonds have been sold to the Citizens' Bank of Grove at par and interest.

S. C., Columbia.—Oct. 5 election is to be held to vote on \$300,000 water-works and \$200,000 sewer-extension bonds. Address The Mayor. (Previously mentioned.)

S. C., Columbia.—\$60,000 paving certificates have been purchased by the Bank of Columbia. B. E. Geer is Chrmn. of Com.

S. C., Florence.—It is stated that the issue of \$52,000 of school bonds recently awarded to the First National Bank of Florence will not be sold on account of a technicality, and that another bond election will have to be held after certain legal requirements are met.

S. C., Sumter.—\$225,000 of 5 per cent. street-improvement bonds are voted. Date for bids not yet fixed. D. M. Blanding is City Clerk and Treas.

Tenn., Byrdstown.—Bids will be received until 1 P. M. Oct. 1 for \$18,000 5 per cent. 10-40-year \$500 denomination highway bonds. Address Pickett County, Tennessee, Highway Com., W. E. Roberts, Chrmn., and H. C. Winghamam, Secy. Further particulars will be found in the advertising columns.

Tenn., Harriman.—It is now stated that the election to vote on \$60,000 5½ per cent. funding bonds will be held Oct. 16. Address The Mayor.

Tenn., Delphi.—Bids will be received until noon Oct. 2 for \$50,000 of 5 per cent. 20-40-year road bonds of Sequatchie county. J. H. Heard is Chrmn. County Commrs.

Tenn., Huntsville.—Bids will be received until Oct. 1 for \$300,000 of 4 per cent. serial road bonds of Scott county; denomination \$1000; maturities \$25,000 in 10 years and \$15,000 yearly thereafter until the last maturity in 1943, when \$20,000 will be due. Bonds to be sold at not less than par. Address W. H. Potter, County Judge.

Tenn., Johnson City.—Bids will be invited about Sept. 25 for Johnson City 5 or 5½ per cent. bonds voted Sept. 2 thus: \$37,500 court-house, \$25,000 market-house. Details of issues will be announced when bids are asked. Address Wm. R. Pouder, City Treasurer.

Tenn., Livingston.—County Commrs. have been asked to call another election on \$100,000 Overton county road bonds, and it will probably be held Oct. 23.

Tenn., Memphis.—Bids for the \$866,000 of 5 per cent. city refunding bonds were rejected because of an ouster suit and consequent complications affecting the bids. E. M. Grant & Co. of New York bid par and accrued interest, subject to the approval of bond attorneys, and Weil, Roth & Co. of Cincinnati bid par, accrued interest and a premium of \$6017.50, provided that should litigation affect the city's financial standing the bid would be canceled. Memphis

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DOUGLAS H. THOMAS, President.
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JOHN B. H. DUNN, Cashier.
Capital \$2,000,000. Deposits \$21,970,000
Surplus and Profits \$2,175,000.
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We invite correspondence.

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Let us send you our list of sound investments, which for three very logical reasons we believe to be attractive at current prices.

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The National Exchange Bank

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United States Depository and Disbursing Agent.

Capital - - - - - \$100,000

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A general banking business transacted.

Special attention given to collections.

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We buy Southern Municipal Bonds (County, City, School, Road and Drainage District).

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21 Years' Experience

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We Buy

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FROM MUNICIPALITIES OR CONTRACTORS

We are in position to pay HIGHEST PRICES.

Write or Wire Us Your Offerings

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Cable Address "HASKSELLS"

Announce the Opening of an Office at
ATLANTA—Mr. L. C. Matthews, Manager

And an Office at
DENVER—Mr. C. H. Banks, Manager

bankers have offered to loan the city \$1,000,000 for a year or until the oyster case is disposed of. Wm. A. Read & Co. of New York, who hold the city's short-term note for \$986,000, dated June 28, did not bid because of the suit. Their representative intimated that consent to renewal of the note might be obtained.

Tenn., North Chattanooga.—Bids will be received until 2 P. M. Sept. 27 for \$50,000 of 5 per cent. 30-year sewer bonds, denomination \$1000. Address J. Read Volgt, Mayor.

Tenn., Park City, P. O. Knoxville.—\$90,000 bonds Improvement Dist. No. 3 have been purchased by J. C. Meyer & Co., Cincinnati.

Tenn., Rogersville.—Bids will be received until noon October 2 for \$250,000 of 5 per cent. serial, \$1000 denomination, road bonds of Hawkins county. Address H. B. Stamps, Chairman, County Court, Mooresburg, Tenn. Further particulars will be found in the advertising columns.

Tenn., Rutledge.—Grainger county is reported to have voted \$200,000 of road bonds by a large majority. Address County Comms.

Tenn., South Fulton.—The proposed issue of \$5000 of 6 per cent. 20-year water bonds was defeated at the recent election. Dunlap Murphy is Clerk.

Tex., Amarillo.—\$50,000 of street paving bonds are reported voted. Address The Mayor.

Tex., Arlington.—Election Sept. 14 on \$10,000 sewer-extension bonds.

Tex., Austin.—Attorney-General has approved city of Taylor street-improvement bonds, \$100,000, 5 per cents.; also 5 per cent. school bonds thus: \$5000 Frio Dist., \$5000 Dist. 1 and \$2500 Dist. 10, both of El Paso; besides these: Upshur, Dist. 25, \$600, and Dist. 21, \$1800; Houston county, Dist. 71, \$800, and 3, \$700; Upshur, Dist. 10, \$1500,

Dist. 12, \$1200, Dist. 28, \$4000, Dist. 13, \$1700; McCulloch county, Dist. 37, \$800. Karnes county road bonds, \$75,000 of Dist. No. 1, were also approved, and the following 5 per cent. school bonds: Hardeman county, Dist. No. 4, \$10,000; San Saba county Dist. No. 15, \$2800; Limestone county, Dist. No. 27, \$2000, Dist. No. 113, \$1200, Dist. No. 17, \$1500; Johnson county, Dist. 70, \$2000, Dist. 11, \$1000, Dist. 62, \$3000, Dist. 51, \$2500, Dist. 41, \$1000, Dist. 7, \$1000, and lastly, \$375,000 of 5 per cent. Collin county bonds of Road Dist. No. 4.

Tex., Beaumont.—Election Sept. 17 on \$25,000 5 per cent. 10-40-year optional Jefferson county jail and insane hospital bonds. Address County Comms.

Tex., Denison.—\$50,000 of 5 per cent. 20-year \$500 denomination viaduct bonds have been voted. C. T. McElvaney is Mayor.

Tex., Corsicana.—Election Oct. 10 on \$125,000 city bonds thus: Street, \$80,000; schools, \$25,000; sewers, \$20,000. Address Mayor Halbert.

Tex., Dallas.—Bids will soon be asked, it is expected, on the \$135,000 of 5 per cent. 10-40-year Dallas county viaduct bonds which were recently voted. J. L. Goggins is attorney.

Tex., Denton.—The sale of \$75,000 school and \$10,000 street and sidewalk 5 per cent. 10-40-year bonds to H. M. Noel & Co. of St. Louis at par is reported canceled.

Tex., Donna.—Election called for Sept. 17 on \$50,000 bonds of Donna Irrigation Dist. Address D. H. Barr, Secy. Irrigation Dist.

Tex., El Paso.—Bids will be received until 10 A. M. Sept. 30 for \$500,000 of El Paso city school bonds, Series 10. J. F. Dawson is City Clerk. Further particulars will be found in the advertising columns.

Tex., El Paso.—Election on \$300,000 road bonds of El Paso county is called for Oct. 12 instead of Oct. 5. Address Adrian Pool, Judge.

Tex., Fort Worth.—\$35,000 Diamond Hill School Dist. bonds, it is reported, will soon be placed on the market. Address School Board.

Tex., Port Lavaca.—No satisfactory bids were received Sept. 1 for \$17,000 5 per cent. 5-40-year school bonds, and new bids will be received until noon Sept. 22. A. A. Ames is City Secy.

Tex., Galveston.—Concerning recent report that \$300,000 of city bonds would be voted on this month, it is officially stated that there has not been any bonds authorized for the past two years.

Tex., Highland Park, P. O. Dallas.—\$10,000 20-year light bonds have been purchased at par by a Galveston firm. Address The Mayor.

Tex., Livingston.—\$17,000 of street-improvement bonds recently voted are reported sold to the Southern Securities Co., Houston, Tex.

Tex., Marble Falls.—City Council has ordered an election on \$3000 of crematory bonds. Address The Mayor.

Tex., Nacogdoches.—The Blanton-Wise Co., Kress Bldg., Houston, Tex., has purchased bonds as follows: Nacogdoches Independent School Dist. 5 per cents, \$45,000; Nacogdoches School Dist. No. 23, 5 per cents, \$12,500.

Tex., Orange.—Election Oct. 16 on \$7000 of road bonds, 4th precinct of Orange county. Address County Comms.

Tex., Ozona.—\$20,000 of Crockett county road bonds have been sold to the Ozona National Bank.

Tex., Seadrift.—Bids are being received by W. J. Thomas, Prest. Board of Education, for \$17,500 5 per cent. 5-40-year school-building bonds.

Tex., Seguin.—\$12,500 of 5½ per cent. 10-40-year optional road bonds of Guadalupe county, denomination \$500, have been sold to J. E. Jarrett at 96.40.

Tex., Tahoka.—Election Sept. 18 on \$25,000 of Lynn county road bonds. Address County Comms.

Tex., Uvalde.—\$5000 of 5 per cent. sewer bonds have been bought by J. L. Arlitt of Austin, Tex., this being the unsold balance of \$35,000, dated Feb. 10, 1911.

Tex., Waxahachie.—\$125,000 of Ellis county levee bonds for the Trinity River are reported voted. Address Levee Comms.

W. Va., Berkeley Springs.—Bids will be received until noon Oct. 2 for \$15,000 of 6 per cent. 30-year street-paving bonds, denomination \$500. Address J. A. Risinger, Mayor.

W. Va., Keyser.—Bids will be received until Sept. 25 for \$35,000 of 6 per cent. 35-year school site and building bonds; optional after 1925 with Board of Education; denomination \$500. Bonds voted Aug. 14. Address C. N. Fennell, Prest. J. C. Sanders is Supr. of Schools.

W. Va., Logan.—The proposed issue of \$200,000 of Logan county road bonds was defeated at the recent election. Bruce McDonald is Prest. County Court.

Va., Williamsburg.—Election to be held Sept. 28 on \$30,000 of water-works bonds. Address The Mayor.

FINANCIAL NOTES

The annual convention of the Investment Bankers' Assn. of America will be held Sept. 20, 21 and 22 at Denver, Col. F. R. Fenton, III W. Monroe St., Chicago, is Secy.

Bowman, Cost & Co., investment bankers, Third National Bank Bldg., St. Louis, have issued a circular called "Missouri Drainage and Levee Bonds," prepared by John H. Nolen, Commissioner Department Land Reclamation, State of Missouri, and which is an official analysis of the laws safeguarding investments in bonds issued for the protection of arable areas and the recovery of tillable lands from swamp and flood regions.

CONDENSED REPORT TO COMPTROLLER

The First National Bank

OF BIRMINGHAM, ALA.

ALABAMA'S FIRST MILLION-DOLLAR BANK

THURSDAY, SEPTEMBER 2, 1915.

RESOURCES	
Loans and Discounts.....	\$8,611,041.75
Overdrafts.....	109.55
U. S. Bonds (Par).....	1,500,000.00
State of Alabama Bonds.....	283,000.00
Other Stocks and Bonds...	857,363.50
Banking House.....	365,500.00
CASH	
In Vault.....	\$1,153,497.11
With Banks.....	2,313,805.03
With U. S. Treasurer.....	70,000.00
With Federal Res. Bank..	229,632.07
	\$ 3,771,934.26
	\$15,388,954.06

LIABILITIES	
Capital Stock.....	\$ 1,500,000.00
Surplus and Profits.....	1,786,964.73
Reserved for Taxes.....	29,688.00
Circulation.....	1,231,750.00
DEPOSITS	
Individual... \$	9,796,650.25
Bank.....	918,901.03
United States.....	125,000.00
	\$10,840,551.28
	\$15,388,954.06

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J. H. BARR, Chairman	THOMAS HOPKINS, Cashier
OSCAR WELLS, President	F. S. FOSTER, Assistant Cashier
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DIRECT CONNECTIONS AT ALL ALABAMA POINTS

INDUSTRIAL NEWS OF INTEREST

Enters Consulting Engineering Field

H. S. Cooper, 405-406 Slaughter Bldg., Dallas, Tex., announces that he has made arrangements with the Southwestern Electrical and Gas Association whereby, while retaining its secretary and operating its office, he is free to do for himself such advisory and consulting work in the construction, operation and management of inter-urban and street railways, electric light and power plants, gas works and water-works as is outside the province and practice of the association.

Fort & Parslow, Architects.

L. A. Fort and F. D. Parslow have opened offices in the Curry Bldg., Tampa, Fla., under the firm name of Fort & Parslow, for the practice of architecture. Mr. Fort was formerly located at Lakeland, Fla., and Mr. Parslow was of the firm of Hagy & Parslow, architects of Tampa, which was recently dissolved. The new firm requests manufacturers and dealers in building supplies to send catalogs and samples to complete its files.

Large Coaling Station Contracts Awarded.

Surety Engineering Co., Inc., engineer, contractor and manufacturer of elevating, conveying and power transmission machinery, 127 Duane St., New York, has been awarded a contract by the B. & O. Chicago Terminal Railroad Co. for a 1000-ton automatic coaling station to be erected at Chicago. This contract is said to cover the largest coaling station which has been installed in several years. The Surety Engineering Co. also announces it has secured

contract for a 200-ton automatic coaling station at Lima, O., for the Cincinnati, Hamilton & Dayton Railroad.

Reports Increase in Sales.

Through its Southern sales manager, W. F. Johns, who has offices in the Healey Bldg., Atlanta, Ga., the General Roofing Manufacturing Co., St. Louis, has increased its July sales of this year 232 per cent. over the same period in 1914. Among the recent contracts closed for "Certainteed" roofing manufactured by this company and sold in the South is 1750 squares for a cotton mill under construction by the West Point Manufacturing Co. at West Point, Ga., and the addition to the Crown Cotton Mills at Dalton, Ga., where 1000 squares will be used. Mr. Johns is optimistic and states that there is plenty of business to be secured in the South if the seeker is willing to work for it.

Reports Better Business.

The month of August has been one of the banner months of the year for the Southern Seating & Cabinet Co., Jackson, Tenn. A. K. Tigrett, manager of the company, reports that among the orders recently shipped is one for the fixtures of the Bank of Lexington, Lexington, Miss., Stephen L. Burwell, cashier; another has gone to the Madison County State Bank, Winterset, Iowa, E. E. McCall, president. The material for these fixtures includes red gum and English-rein Italian marble. A third order went to the Pennington County Bank, Rapid City, S. D., George F. Schneider, president, and included all the counters, wickets and grilles, amounting to \$9000 and employing Alaskan Tokean marble, mahogany and bronze. The

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The S

E

Southern Seating & Cabinet Co. makes a complete line of fixtures for banks and offices, as well as seating equipment for churches, schools, etc., and maintains offices in many cities.

York Safe & Lock Co. Honored at San Francisco.

Wright D. Pownall, who has charge of the Panama-Pacific exhibit of the York Safe & Lock Co. of York, Pa., was appointed to represent the State of Pennsylvania at the Labor Conference held in San Francisco and attended by Secretary Wilson of the Department of Labor on August 2, 1915. The selection was made by George R. Moore, superintendent of the Pennsylvania Bldg., in response to a request from Governor Brumbaugh that a Pennsylvanian connected with the employment of labor be appointed. This is another recognition of the important exhibit displayed by the York Safe & Lock Co., which was awarded the highest honors—the Grand Prize—and is also a deserved personal tribute to Mr. Pownall.

Memphis-Servis Road Drag.

An improved type of road drag has recently been developed by the Memphis Bridge Co., Memphis, Tenn. The drag is constructed of structural steel shapes riveted together for supporting in front an

8-inch curved plow steel blade. This is claimed to be a great improvement, as the blade can be set for cutting off bumps and high places. The drag is adjustable and can be tilted front or back at any desired angle for cutting or dragging. In operation the drag is said to fill up ruts and round up the road, plastering it over smooth, so that water falling on the road surface will run off into the side ditches. The curved blade shaves off the grass and weeds along the side of the road, which, if allowed to grow, interfere with proper drainage.

To Install Snyder Electric Furnaces.

The Thomas Davidson Manufacturing Co. of Montreal, Canada, has closed a contract for the installation of a Snyder electric furnace for melting and refining cold steel scrap, producing high-grade steel for casting into blanks for the manufacture of shells. This is the second Snyder furnace to be contracted for to produce steel for use in making war munitions. The other furnace will be installed at Sherbrooke by the Canadian Brakeshoe Co. In view of the stringent requirements with regard to war munitions, it is significant of the development of electric furnaces that they are being installed for this purpose. The Thomas Davidson Manufacturing Co. is well known as the manufacturer of stamped utensils from tin and other sheet metal, and the cuttings from its stamping department will be used, together with scrap available in the district, for melting down in the

Snyder furnace. The Snyder Electric Furnace Co., 53 W. Jackson Blvd., Chicago, build electric furnaces for all manner of melting, smelting, heat treatment and chemical work.

Hollow Building Tile Manufacturers' Association.

In order to make the advantages of hollow building tile more widely known and appreciated, a number of the leading manufacturers of the country have an organization known as the Hollow Building Tile Manufacturers' Association of America. This body has for its objects the advancement of the interests of the members by a careful, concerted study and investigation of financial, scientific or mechanical matters pertaining to the manufacture of hollow building tile and the dissemination of information that will give the public a first-hand knowledge of the merits of this product. The Association has entered upon a standardization and codification of hollow building tile in connection with the American Society for Testing Materials, and has also written a specification for the use of hollow tile as a structural unit based on the experience to date of manufacturers, building inspectors and city engineers. The second edition of this publication will shortly be issued, in which some changes have been made. The Association has also established a form of contract, terms of sale, a code of business ethics to unify the practice of the trade, just as has been done in iron, steel,

lumber and other trades. Another plan of this organization is to pay special attention to the revision of municipal codes. The officers of the association are: President, J. A. Maahs, general manager Pennsylvania Fireproofing Co., Erie, Pa.; vice-president, R. W. Allison, National Fireproofing Co., Pittsburgh, Pa.; treasurer, H. H. Camp, president the Camp Conduit Co., Cleveland, Ohio. Executive committee: W. C. Denison, president the Ohio Clay Co., Cleveland, Ohio; B. C. Keeler, secretary-treasurer Mason City Brick & Tile Co., Mason City, Ia.; H. H. Titworth, president the Clay Product Co., Brazil, Ind.; R. E. Whitacre, the Whitacre Fireproofing Co., Waynesburg, Ohio; Charles T. Harris, secretary, 824 Engineers' Bldg., Cleveland, Ohio. The office of the association is located at 824 Engineers' Bldg., Cleveland, Ohio.

Berger System of Floor Construction Passes Severe Fire Test.

Complete report of the New York city official fire, water and load test conducted by Prof. James MacGregor at the Columbia University Testing Stations has been made and contains some very interesting information to those interested in fire prevention through the building of fireproof structures. The test was conducted in a concrete furnace 14x20 feet. Berger's metal lumber pressed steel floor construction was used as the temporary roof of the building. Seven-inch joists of 12-gauge pressed steel were

(Continued on Page 76.)

\$50,000 5% Bonds

Dunlap, Tenn., Aug. 25, 1915. Sealed bids will be received by the undersigned Board of Road Commissioners until 12 o'clock noon Saturday, Oct. 2, 1915, for the purchase of \$50,000 Sequatchie county, Tennessee, road bonds.

Said bonds run for a period of forty years from their issuance, and shall be redeemable at any time after twenty years from their issuance, at par, at the option of said county. Said bonds shall bear interest at the rate of 5 per cent. per annum from their date until maturity, payable semi-annually. Said bonds will be issued in denominations of not less than \$500.

All bids for said bonds must be in sealed envelopes, addressed to the chairman of the Board of Road Commissioners, and be accompanied by a certified check for \$500, properly conditioned, as an evidence of good faith on the part of the bidder. The Commissioners reserve the right to reject any and all bids.

J. H. HEARD, Chairman.
R. R. FARMER,
J. B. JOHNSON, Secretary.

Water-Works Material

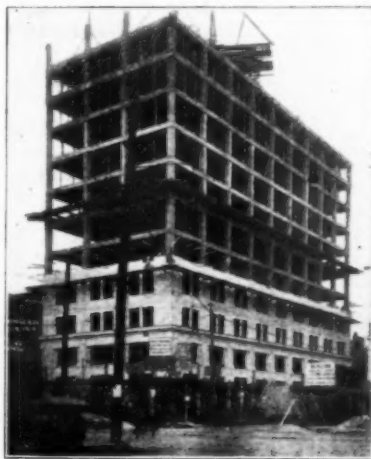
Sealed proposals will be received by the Commissioners, Water-works Improvements, District No. 1, Leslie, Arkansas, at the office of the Commissioners, for furnishing all material and equipment for a Water-works System until 3 P. M. September 20, 1915, at which time they will be opened and read publicly.

2 150-gallon centrifugal pumps for 370' head.
1 1000-gallon centrifugal pump for 50' head.
1 25 H. P. 3-phase motor.
2 30 H. P. 3-phase motors
288 tons stone.
445 barrels cement.
3500 brick.
30,170 pounds reinforcing steel.
7,200 feet 1½" galvanized iron pipe.
10,300 pounds pig lead.
350 pounds water main jute.
41 1½" to 8" gate valves.
30 6" fire hydrants.
5,600 feet No. 14 telephone wire.
17,350 feet No. 8 hard drawn bare copper wire.

Each bid must be accompanied by a certified check for 5 per cent. of amount bid, drawn to the order of the Commissioners. Specifications may be obtained from the Engineers at Little Rock, Arkansas, and Atlanta, Ga.

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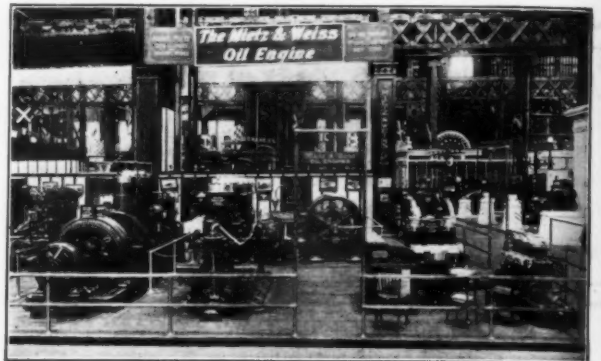
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[Continued from Page 73.]

placed 15½ inches on the center and covered top and bottom with Berger's B. B. expanded metal lath, the top being concreted and the under side being plastered. Under this construction a fire was maintained for four hours, generating an average heat of 1700 degrees. Such intense heat for such a long period of time is a condition which would rarely be encountered in actual practice in this day of modern fire-fighting methods. At the end of four hours water pressure of 83 pounds to the square inch at the fire engine was directed through a 1½-inch nozzle against the under side of the floor construction for a period of five minutes. The hose was then taken to the top of the structure and water allowed to flow for a period of 2½ minutes; then another attack with pressure was made on the under side for another five minutes. According to the re-

tory under all conditions. Of the various mentioned Nos. 54, 98, 101 and 102 are equipped with Mietz & Weiss direct-reversible oil engines of 100, 150 and 200 horse-power. These engines are of the two-stroke cycle type, in which every down stroke of the piston is a power stroke. The fuel is sprayed directly into the combustion chamber shortly before the completion of the compression stroke. An efficient and sensitive governor regulates the amount of oil injected at each stroke in direct proportion to the load on the engine. In case of breakage of propeller shaft or loss of propeller the engine speed is said not to rise appreciably above normal. For ordinary maneuvering purposes the engine is controlled by a throttle lever on the governor. Starting and reversing are effected by means of the S. & W. distributing valve, which is standard equipment on all of the large Mietz & Weiss marine oil engines of three or more



PANAMA-PACIFIC MIETZ & WEISS OIL-ENGINE EXHIBIT.

port, at this point in the test the deflection of the joist measured only 52-64 of an inch. In order to determine how much life or strength was left in the construction it was loaded with pig-iron to the amount of 600 pounds to the square foot, or four times the weight it was built to carry. The deflection of the joists was only 1-49-64 as against 2½ inches permitted by the New York Building Code. After the removal of the load it is said the final deflection was only 45-64 of an inch. It is reported that not a drop of water or a flicker of flame came through. Berger's metal lumber, having passed the official test, has been authorized for use in New York as a fireproof system of construction. It undoubtedly will be popular in that city, as it has been in other localities, for the reason that the dead load is comparatively little, being, it is stated, only about 40 pounds to the square foot, and the cost is claimed to be exceedingly low. The Berger Manufacturing Co., Canton, O., advises that its metal lumber pressed steel floor construction has been used in over 54 types of buildings in 39 States and 8 foreign countries. It is adaptable to all styles of buildings, from the small garage to the large skyscraper.

Mietz Oil Engine Award Raised to Medal of Honor.

Upon revising the award of gold medal recently made to the August Mietz Machine Works, the Superior Jury of Awards of the Panama-Pacific International Exposition has raised said award from gold medal to medal of honor in the department of machinery, under the classification "Injection Oil Engines." The exhibit is located in the Machinery Building, and includes eight examples of that company's design and construction of horizontal and vertical engines for stationary and marine service. Although internal combustion engines were not heretofore used in large size to any great extent in this country, the field for their use is rapidly widening, and they are finding favor in a great variety of industries on account of the low fuel cost, entire absence of "stand-by" losses and other operating advantages which result in marked economy. One field in which several installations of the Mietz & Weiss oil engines have recently been made is the lightships along the Atlantic coast. Five ships of this class, Nos. 54, 96, 98, 101 and 102 have been or soon will be equipped with Mietz & Weiss oil engines for compressing air for various purposes about the ship, such as operating siren for fog signalling, starting the main engines, and driving winches, windlasses, fire and bilge pumps, etc. Lightship No. 54 is claimed to have developed a speed of 8.1 knots an hour on her trial trip, with the engine running at only 200 revolutions per minute, instead of its normal speed of 240. The report of the inspector in charge of the test shows that the control and reversing of the engine and maneuvering of the ship was satisfac-

cylinders. The use of this valve facilitates maneuvering. Throwing the lever to one side starts the engine; returning it to the center stops the engine, and throwing it to the other reverses the engine. The lever positively controls the fuel injections to all cylinders, while the speed of the engine is controlled by the throttle on the governor. Since by the use of this distributing valve the direction of rotation of the engine shaft itself is reversed, the customary clutch and reversing gears are unnecessary, and the engine and propeller shafts are coupled rigidly together. Mietz & Weiss direct-reversible marine oil engines are built in 3, 4 and 6-cylinder types, ranging from 45 horsepower to 600 horse-power, and are manufactured by the August Mietz Machine Works, 128 Mott St., New York.

TRADE LITERATURE

New Armeo Publications.

Among the new publications issued by The American Rolling Mill Co., Middletown, O., is one on "Armeo Iron Rust Resisting Products," in which are illustrated and described most of the important Armeo products manufactured at the Middletown factory and quite a number of those produced by other manufacturers. "Defeating Rust" is the title of another new edition, which has been extensively revised as compared with the edition issued a year ago by the company. This book fully covers the inception, development, qualities and uses of Armeo (American ingot) iron. The two publications contain useful information with regard to this material, which is now assuming an important place in construction that is intended to be lasting, and may be obtained upon request of the American Rolling Mill Co.

"Hy-Tex" Brick Catalogue.

The Hydraulic-Press Brick Co., maker and distributor of "Hy-Tex" face brick, St. Louis, Mo., has recently issued a catalogue containing general information regarding its different offices and the many character of brick made by its various factories. The catalogue also contains a few reproductions of Hy-Tex brick in colors. Southern branch offices and centers of manufacture and distribution are in the Title Bldg., Baltimore; Colorado Bldg., Washington, D. C.; and Rialto Bldg., Kansas City, Mo. Principal Southern selling agencies for Hy-Tex brick are: Sciple Sons, 19 Edgewood Ave., Atlanta; King Brick Co., Woodward Bldg., Birmingham; Fraser Brick Co., Sumpter Bldg., Dallas; Tyler Building Supply Co., Louisville; Memphis Brick Supply Co., Memphis; T. L. Herbert & Son, Nashville; F. Coleman Ford, Inc., New Orleans; G. S. Friebus, Carpenter Bldg., Norfolk; Powhatan Clay Mfg. Co., 14 N. 7th St., Richmond; Adams, Payne & Gleaves, Inc., Roanoke, and I. W. Phillips & Co., Tampa.

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